

National Reading and Numeracy Tests

**Understanding the outcomes –
information for practitioners**



Llywodraeth Cymru
Welsh Government

Helping parents/carers to understand outcomes from the National Reading and Numeracy Tests

As part of the national reading and numeracy testing programme, the test outcomes for individual learners are provided to parents/carers in the form of a Pupil Results Sheet. Some parents/carers may be unfamiliar with interpreting these types of test results but it is very important that they are able to understand the information given to them about their child and what it means for their learning. The Pupil Results Sheet includes notes that explain the presentation of results.

This guidance highlights some key points that may be helpful to practitioners when discussing test outcomes with parents/carers. It is structured around questions that parents/carers may have. You may also find it useful to refer to the Welsh Government's *Reading and numeracy tests in Wales: Information for parents and carers of children in Years 2 to 9* at learning.gov.wales/resources/browse-all/reading-and-numeracy-tests-information-for-parents-carers/?lang=en.

Pages 6–8 of this guide have technical information on the tests that practitioners may find useful.

What are the national tests for?

The national tests give every school in Wales the same information on reading and numeracy skills for all their learners. The tests are **not** a replacement for other types of assessment used in school across the whole curriculum. The results from the tests add to the information that schools and teachers already have about achievement in reading and numeracy from their work with learners every day in the classroom.

What is the difference between a teacher assessment judgement and a test result?

Teacher assessment judgements are built up from a large evidence base over time. They can take account of skills demonstrated through observation, oral work, class discussion, extended tasks and projects and during group work, for example. A test result reflects the skills demonstrated through written responses to questions on a given occasion when all learners take the tests under the same conditions. Both types of assessment provide useful, but different, information.

My child's test result seems to contradict the teacher assessment judgement – what does this mean?

Assessments can give contradictory results for several reasons and need to be interpreted carefully. Using outcomes from different assessments can prompt important questions and help to get a clearer picture of strengths and areas for improvement.

If a test result suggests that a learner is demonstrating skills that they do not show during classroom work, then it may be that they need more encouragement to

contribute with confidence to oral work and class discussion. If a test result suggests that a learner has not demonstrated all the skills they show in the classroom context, then this might be because the test included questions on topics where their learning is not fully secure or that they do not always show their best work through written responses. All forms of assessment have limitations and that is why best assessment practice draws on a range of different assessment opportunities, including formal tests.

How can a test result help to show where my child needs to improve?

The individual questions in all the National Reading and Numeracy Tests are linked to the expectation statements in the National Literacy and Numeracy Framework (LNF). The LNF sets out annual expected outcomes for literacy and numeracy. Because the tests are marked in school, teachers can see where there are gaps in knowledge and understanding and identify what the next learning priorities should be both for individuals and in class groups. (Your school may already be using the diagnostic tools for the reading and numeracy tests published on Learning Wales at learning.gov.wales/resources/browse-all/national-reading-and-numeracy-tests-diagnostic-support-tools/?skip=1&lang=en).

What does the age-standardised score tell me?

(It may be helpful to refer parents/carers to *Reading and numeracy tests in Wales: Information for parents and carers of children in Years 2 to 9* at learning.gov.wales/resources/browse-all/reading-and-numeracy-tests-information-for-parents-carers/?lang=en).

The age-standardised score from each of the national tests shows how well an individual learner did on the test compared to **other learners of the same age (in years and months)** taking the test.

What is a progress measure?

The progress measures from the national tests show how well an individual learner has done in the tests each year compared to **all other learners taking the test** in the same national curriculum year group. It is possible to compare the progress measure from one year to the next to get a picture of progress over time.

Should the results of the Numeracy Test (Procedural) and Numeracy Test (Reasoning) be compared?

The Numeracy Tests (Reasoning) are new and innovative, and learners' results in these tests may differ from their results in the Numeracy Test (Procedural). It is important for parents/carers to understand that the tests focus on different skills. The procedural test measures skills in number, measuring and data skills; the reasoning tests measure how well learners can use what they know to solve problems.

Parents/carers might wish to know how their child is performing in reasoning activities within the classroom or how best to support their child in developing these skills.

Why is there no result for one of the tests?

Results should be provided for every test taken by a learner. Where a learner was absent during the test period and unable to take one or more tests, there will be no result. If a decision has been taken in schools that a learner should not take a particular test because they would be unable to access it, then there will be no results¹. Where a learner has taken a test for a different year group, you may wish to share diagnostic information with their parents/carers.

My child has achieved the maximum age-standardised score/progress measure possible – do the tests ‘set a ceiling’ on achievement?

Like any test, the National Reading and Numeracy Tests are specified to assess a particular ability range. Essentially, they are designed to measure the skills in reading or numeracy that would be expected across the year group or year groups nominated for each test. If an individual learner is performing at the top of the ability range, their test result cannot accurately determine the limit of their reading or numeracy ability and we can only say that their standardised score is more than the maximum value measured by that test. This does not, however, mean that their progress in reading or numeracy cannot be tracked over time, just that more information than their test scores will be needed to provide a true picture of the progress they are making. Parents/carers may wish to know about any steps being taken to provide their child with more challenging tasks and/or texts.

Should I compare my child’s age-standardised scores from one year to the next?

Essentially, an age-standardised score is a way of comparing one learner’s performance on a test to the performance of other learners of the same age. So if you compare age-standardised scores from one year to the next you may be able to see that in one year a learner’s score shows that their performance was similar to most learners of the same age (85–115) and maybe in the next year their performance was a little better than for other learners of the same age (maybe 120). The progress measure from the tests each year will be shown in all pupil reports from now on so that parents can track the achievement of their child each year compared to all other learners taking the same test.

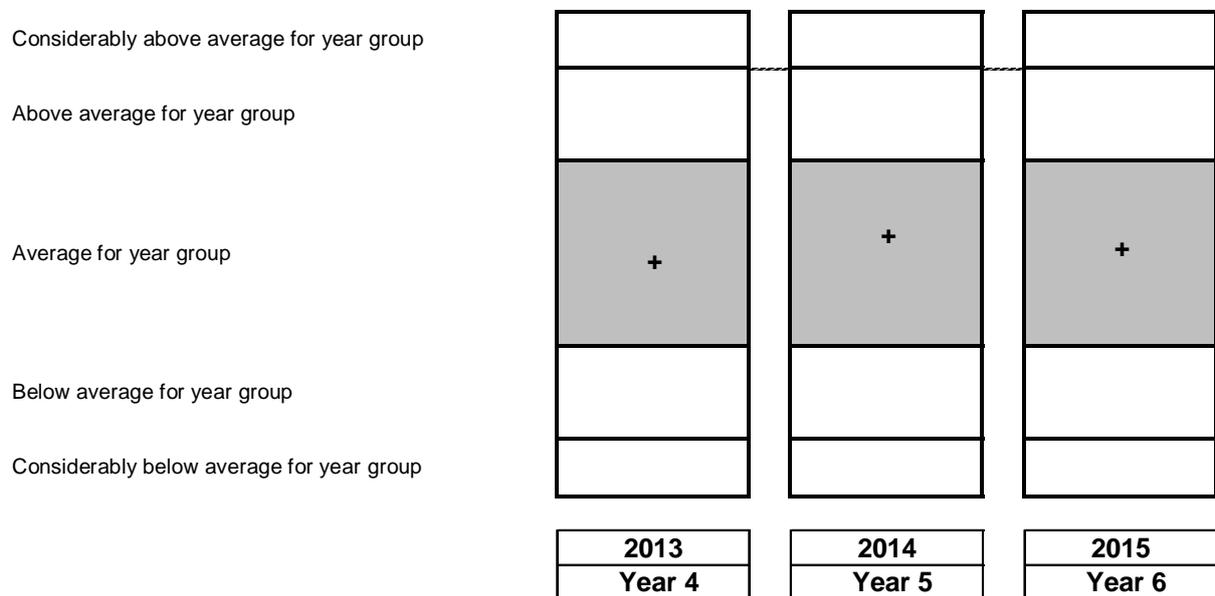
¹ Please note though that in line with Welsh Government policy on inclusion, both absent and disapplying learners will be assigned an age-standardised score of less than 70 for reporting purposes in the Welsh National Tests Data Collection (WNTDC).

Can I use the test scores to check if my child is making progress?

By looking at the chart that shows progress measures from each year the tests have been taken, you can see how your child's achievement compares to all other learners. Learners who have progress measures that are broadly consistent over time are making progress in line with all the other learners in their year group. Small fluctuations up or down would be expected and could be due, for example, to factors affecting how the learner performed on the day of testing. If your child's marking remains in the same shaded block from year to year this means your child is broadly maintaining their position in the year group. Learners with more pronounced changes in their progress measure, either up or down, are making more or less progress than other learners in their year group.

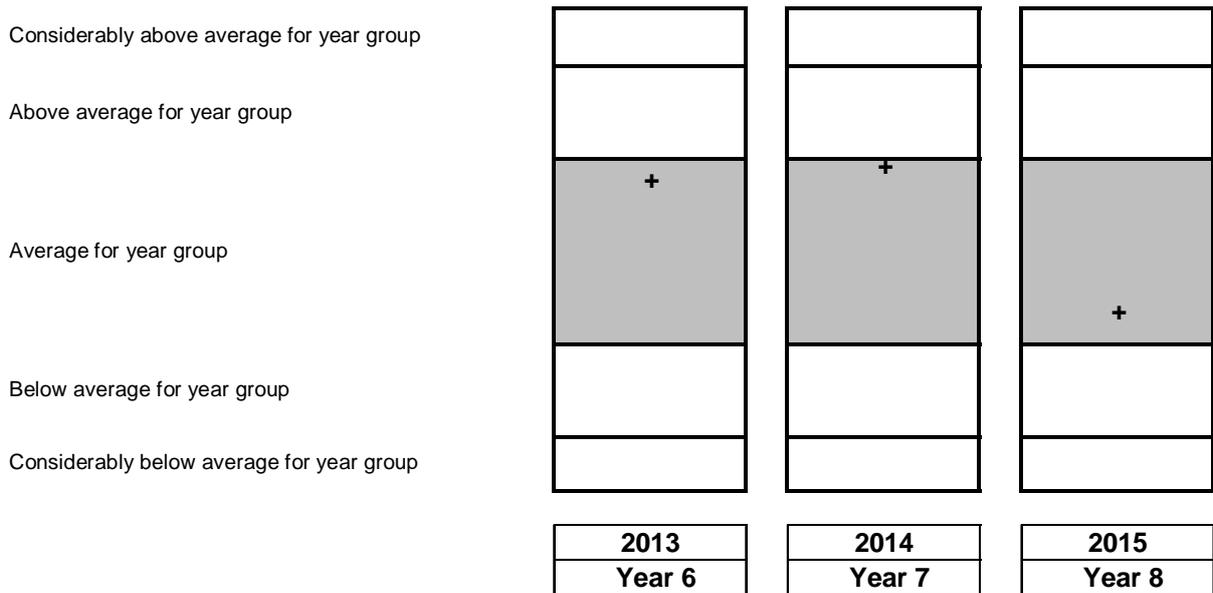
The sample charts below show some patterns in progress measures.

English reading progress measure



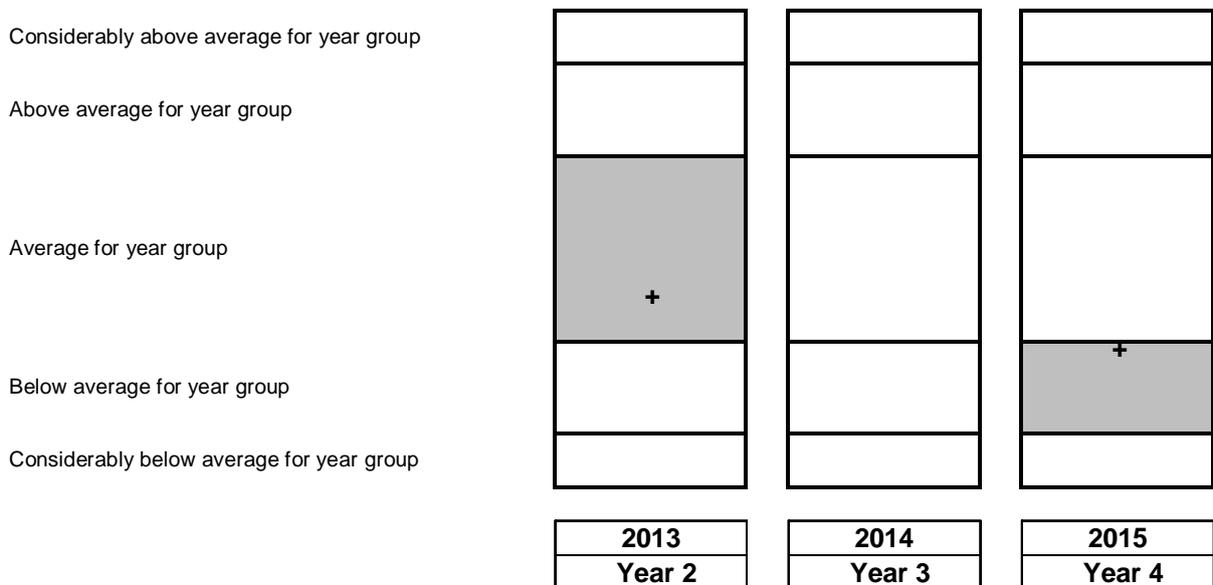
Now in Year 6, this learner has made progress in line with all other learners in their year group since first taking the tests in Year 4. The slight variations in progress measure each year are to be expected.

Welsh reading progress measure



This learner's test results show that steady progress was made in Welsh reading between 2013 and 2014, maintaining their position in the cohort. Although their performance on the test in 2015 was still within the average range, the chart suggests that compared to other learners taking this test in 2015, this learner has not done as well as would have been expected from their previous test results. It would be worth exploring whether there is any aspect of the curriculum covered in Year 8 that this learner has found particularly challenging.

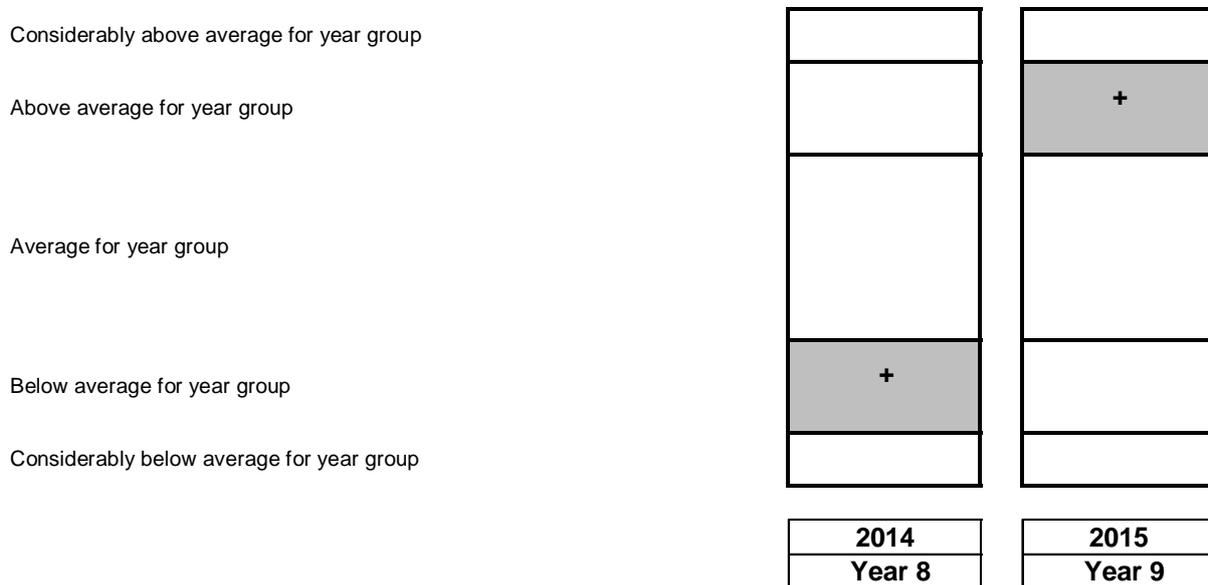
Numeracy procedural progress measure



This learner was absent for the test in 2014 and so it is not possible to get a complete picture of their performance over time. Between 2013 and 2015 their position compared to other learners now in Year 4 has slipped slightly, but this does

not necessarily reflect a significant lack of progress. Evidence from teacher assessment would help in identifying whether there is any cause for concern.

Numeracy reasoning progress measure



The tests for numeracy reasoning were introduced for the first time in 2014. Between 2014 and 2015, this learner has made comparatively more progress than other learners taking these tests in Year 8 and Year 9.

Technical information on test scores and scales

Standardised scores such as the age-standardised score and the progress measure for the national tests are commonly used with tests intended to measure the ability of large groups of individuals. This is because just knowing the number or percentage of correct marks on a test paper is not enough to give a full picture of how well a learner or a group of learners has done in their test. The test results from all schools are analysed to prepare standardised score scales so that meaningful comparisons between individuals and groups can be made. In developing the age-standardised score scale, the average score for each test is set to be equal to a standardised score of 100 and about two-thirds of all learners taking the test would then be expected to have a standardised score between 85 and 115. So an age-standardised score of less than 85 might suggest that a learner may be experiencing some difficulty with the reading or numeracy skills tested, and a score greater than 115 might suggest that a learner is showing reading or numeracy skills that are well developed for their age.

Each test is specifically designed for a particular age group and focuses on the range of skills in reading and numeracy that would be expected for that age group; no test can assess an unlimited range of ability. This means that for learners working at the extreme ends of the ability range in their year group, age-standardised scores from the tests cannot really measure the limit of their skills. For example, learners who are developing reading skills much more slowly than others in their year group might have an age-standardised score of 'less than 70'. What this really means is

that this test alone cannot provide enough information about their skills in reading or areas where improvement is needed. Parents/carers might wish to know what other information the schools can use to inform learning and teaching for these learners so that their needs can be met.

In the same way, learners achieving very highly on the test can only be given an age-standardised score that is 'more than' the maximum score available for the test; we know that they have done very well on this test but we cannot measure how well they might have done if the questions on the test had allowed them to perform to the absolute limit of their ability. Parents/carers might wish to know what other information schools can use to inform learning and teaching for these learners so that they can be confident that they will be sufficiently challenged in future.

For the progress measure, the median raw score for each year group on each of the test papers is calculated and assigned a progress measure of 1000. In the same way that values of 69 and 141 are minimum and maximum for age-standardised scores, the range for progress measures is 950 to 1050. Learners achieving between 980 and 1020 (i.e. scores within one standard deviation of the mean) have a progress measure that is in line with their peers in the same year group. Learners scoring outside of this range (i.e. below 980 and above 1020) have a progress measure that is either below that for most learners in their year group or above that for most learners in their year group.

When comparing progress measures over time, a learner who is making progress at an expected rate would maintain a consistent progress measure between one time point and the next because a learner making expected progress would maintain the same relative position in their year group. A marked rise in the progress measure between time points suggests that they have made more progress than their peers and a marked fall in the progress measure between time points suggests that they have made less progress than other learners in the cohort.

When comparing test scores of populations at different time points, judgements should be made on the basis of statistical analysis to assess whether the differences seen are significant². Because the national tests are new each year, this analysis can only be done retrospectively. For the subjects tested in both 2013 and 2014 (English reading, Welsh reading and numeracy procedural), results have been analysed to look at how large a change in progress measure was significant. It is reasonable to use the size of the change from 2013 to 2014 as **an indicator** of what might point to exceptional progress between 2014 and 2015.

The values of the progress measures for individual learners are not included in the Pupil Results Sheets but they are available in schools' data files.

The table below provides a guide to whether the change in progress measure (up or down) might either be a cause for concern or provide evidence of greater progress than that made by the year group as a whole.

² Statistically significant differences mean that the change in score from one year to the next is unlikely to have occurred by chance.

Year group in 2013	Year group in 2014	English reading		Welsh reading		Numeracy procedural	
		Test taken in 2014	Significant change in progress measure	Test taken in 2014	Significant change in progress measure	Test taken in 2014	Significant change in progress measure
2	3	EA2	13	CA2	13	3CG14/3EP14	18
3	4	EB2	16	CB2	14	4CG14/4EP14	16
4	5	EB2	18	CB2	16	5CG14/5EP14	17
5	6	EC2	18	CC2	18	6CG14/6EP14	16
6	7	EC2	19	CC2	20	7CG14/7EP14	17
7	8	ED2	20	CD2	20	8CG14/8EP14	20
8	9	ED2	20	CD2	19	9CG14/9EP14	18

For example, a learner in Year 3 in 2015 who has taken the EA3 test and whose progress measure in English reading between 2014 and 2015 has increased by 13 or more points is likely to have made significantly more progress than other learners in their cohort.

A learner in Year 3 in 2015 who has taken the EA3 test and whose progress measure in English reading between 2014 and 2015 has decreased by 13 or more points is likely to have made significantly less progress than other learners in their cohort.