



Llywodraeth Cymru  
Welsh Government

PUBLICATION, DOCUMENT

# Patterns of attainment in reading and numeracy: September 2018 to August 2023

A report on patterns in attainment in reading and numeracy, using national-level data from the personalised assessments. Online personalised assessments are taken by all learners in Year 2 to Year 9 in maintained schools in Wales.

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# Introduction

This report includes and supplements the data provided in a short report on reading and numeracy attainment published in November 2023. It presents information on reading and numeracy attainment changes over time, with the addition of analysis by sex and also the gap between pupils eligible for free school meals and their peers. The analysis has been carried out using anonymised, national-level data from the personalised assessments, up to the end of the 2022/23 school year.

Personalised assessments in Reading and Numeracy are online assessments designed to help support development of reading and numeracy skills. They are used in schools as one of a range of approaches to **support progression** as part of Curriculum for Wales. Annual personalised assessments are mandatory for pupils in Years 2 to 9 in maintained schools. The assessments comprise: Numeracy which is taken in two parts - Numeracy (Procedural) and Numeracy (Reasoning); Reading in Welsh and English (see note on timing of introduction of personalised assessments below, and further information on each assessment and the mandatory requirements in the main section of this report).

The assessments provide schools with information on the reading and numeracy skills of individual pupils and an understanding of strengths and areas for improvement in these skills. Following completion of assessments, schools have access to feedback on skills, progress, and a range of reports to help plan teaching and learning. The Welsh Government is clear that the purpose of these assessments is to support progression in learning, and that the assessment outcomes are not to be used for accountability purposes at any level. The publication of this report does not involve any change for schools; personalised assessments will continue to be taken in the same way and used alongside other forms of assessment designed by schools in accordance with the Curriculum for Wales framework. While the purpose of personalised assessments is to support progress at an individual level, anonymised data from

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personalised assessments can also provide some information on reading and numeracy skills at a national level, showing changes in attainment over time and differences between demographic groups, thereby supporting policy development at a national level.

Therefore, the Welsh Government has compiled this report to assist in understanding patterns of attainment in reading and numeracy over time and the potential impact of the coronavirus (COVID-19) pandemic. This is the first year for which national-level data is available as a time series for all assessment subjects. This report uses anonymised data from personalised assessments taken between 2018/19 (the introduction of the first assessment) and 2022/23. Following the publication of this report, annual releases will be issued which will eventually show trends and provide important information on pupils' development of skills over time, at a national level.

The releases will form part of a wider range of national-level information on learner achievement, complementing, for example, the information drawn from our broader programme of national sample-based assessments, which will cover the breadth of the Curriculum for Wales. The sample-based assessments will seek to assess only a sample of schools per year, ensuring that burdens on the system are kept to a minimum while contributing to national understanding of how the Curriculum for Wales is supporting learners' development. This programme is described in further detail in the [Curriculum for Wales Evaluation Plan](#).

## A note on timing and data availability

Personalised assessments were phased in over a period of four academic years:

- Numeracy (Procedural) from 2018/19
- Reading in Welsh and English from 2019/20

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- Numeracy (Reasoning) from 2021/22

This report uses data from 2018/19 to 2022/23. However, COVID-19 disruption has resulted in a gap in data for 2019/20, the year when administration of the assessments was most impacted by the pandemic. Whilst some personalised assessments were undertaken during this period, 2019/20 is not included in this analysis due to insufficient data being available.

## Patterns in attainment over time, by assessment subject and year group

This section of the report compares the attainment of pupils in a given year group over several academic years. For example, it compares the attainment of Year 3 pupils in the Numeracy (Procedural) assessment in 2018/19, 2020/21, 2021/22, and 2022/23. Therefore, for a given year group, different cohorts of children constitute the dataset at different points in time.

For the purposes of this report, to make comparisons at a national level, we express average higher or lower attainment in terms of months. We do this for ease of understanding and because of the nature of the assessments, which do not have a common grading scale of the type used for examinations, for example. Please note that we round all data to the nearest month and in some cases this will mean that a displayed total may not equal the sum of the figures that make up that total. When interpreting the figures in this report, it is important to remember that younger learners have a higher rate of progress year-on-year, in absolute terms, than older learners (see the [technical annex](#) for further information).

In [the November 2023 release](#) we used the first year of operation of each assessment as the reference year for calculation of a typical month's progress in each subject. For this report we use 2022/23 as a consistent year of reference

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across all subjects. This creates a common reference point to examine demographic differences by subject, an important factor considering the pre/post-pandemic introduction of the different assessments. Consequently, the charts below will appear different to those in the November report because the calculations now use 2022/23 as the reference year, both for calculation of an average month's progress and as a benchmark of the difference between years. Whilst there is a slight variation (by no more than one month) in the main points noted below the charts, the key messages regarding changes in attainment remain the same as the November 2023 release.

The impacts on learning during and after the pandemic have been the subject of several studies in the UK and internationally – see the [evidence section](#) of the document linked to this report. The patterns seen in Wales are similar to the research findings in other countries.

A [note on interpreting the figures](#) in this section can be found in a linked document. The figures show patterns in average attainment for Years 3, 6 and 9; data for other year groups is available in the accompanying spreadsheet.

In the following sections the assessments are listed in order of their introduction in schools in Wales. It should be noted that this report shows patterns over a relatively short period since the introduction of personalised assessments, and that further years' data will be required to make judgements on longer term trends. Lower take up of assessments during 2020/21, the year which saw continued disruption during and following the pandemic, may also prove to be a factor for further consideration once future years' data becomes available on trends.

## Numeracy (Procedural)

The Numeracy assessment is taken in two parts. The Numeracy (Procedural) assessment focuses on numerical facts and procedures – the numerical 'tools'

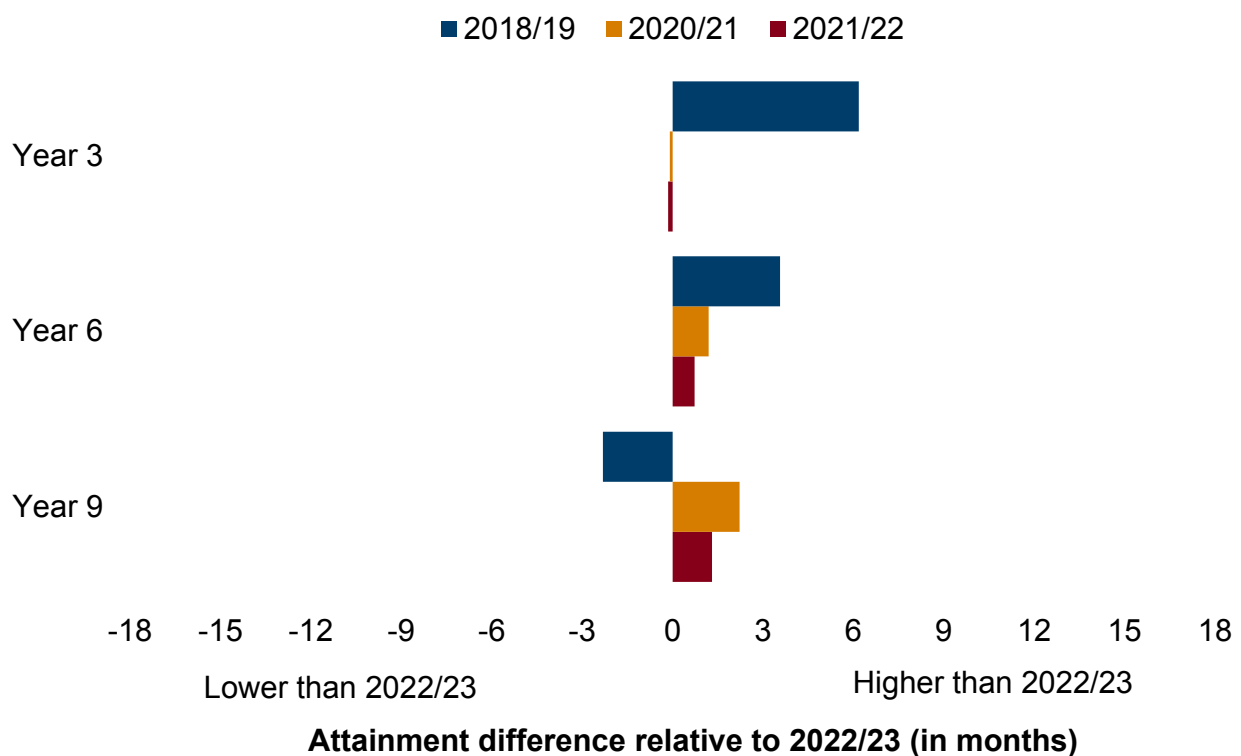
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that are needed to apply numeracy within a range of contexts. It is taken annually by all pupils in Years 2 to 9. This assessment was introduced in the 2018/19 academic year and is the only assessment for which data is available both before and after the disruption caused by COVID-19.

**Figure 1: Numeracy (Procedural): difference in attainment in 2018/19, 2020/21 and 2021/22 relative to 2022/23, in months**



Description of Figure 1: A bar chart showing the average attainment in the Numeracy (Procedural) assessments of the cohort of pupils who were in Year 3, 6, or 9 in 2018/19, 2020/21 and 2021/22. Average attainment is presented as months higher or lower than the attainment of the same year group in 2022/23 (2022/23 performance is denoted by the zero line on the graph). Note that 2019/20 is not included due to insufficient data in the year most impacted by the COVID-19 pandemic.

## Main points

- In Numeracy (Procedural), pupils in 2020/21 demonstrated lower attainment overall than pupils did in 2018/19. On average, this was equivalent to a difference of 3 months in terms of lower attainment in 2020/21 relative to pupils in 2018/19. This may be attributable to the impact of the COVID-19 pandemic, which had similar effects internationally.
- The difference in attainment in 2020/21 relative to 2018/19 was not uniform for all year groups; the difference was greater for younger pupils. In 2020/21 the attainment of pupils in Years 2 and 3 was lower by 7 months relative to Year 2 and 3 pupils in 2018/19; the attainment of pupils in Years 4 to 7 was lower by 4 months relative to pupils in 2018/19. Conversely, in 2020/21 the attainment of pupils in Years 8 and 9 was higher by 3 months relative to pupils in Years 8 and 9 in 2018/19. This suggests that younger pupils were more negatively impacted by the pandemic, whilst older pupils were better able to manage the change in learning situation.
- In 2021/22, average attainment remained similar to that seen in 2020/21, across all year groups. This is within the pattern of minor changes over time that can be expected without major external influences.
- In 2022/23, average attainment for pupils in Years 2 to 5 was very similar to, or above, that seen in 2021/22; however, for Years 6 to 9, average attainment was 1 month lower relative to 2021/22. The pattern was consistent throughout all year groups, shifting gradually from similar to marginally higher attainment in 2022/23 for younger pupils, to lower attainment for older ones, in a systematic manner.

In summary, for most year groups in 2022/23, the attainment of pupils in Numeracy (Procedural) was lower than it was in 2018/19, an average of 4 months' difference in attainment. Attainment for Years 2 to 3 was around 7 months lower, for Years 4 to 7 it was around 4 months lower, and for Year 8 it was down by half a month. Conversely, attainment for Year 9 pupils was 2 months higher relative to Year 9 pupils in 2018/19.

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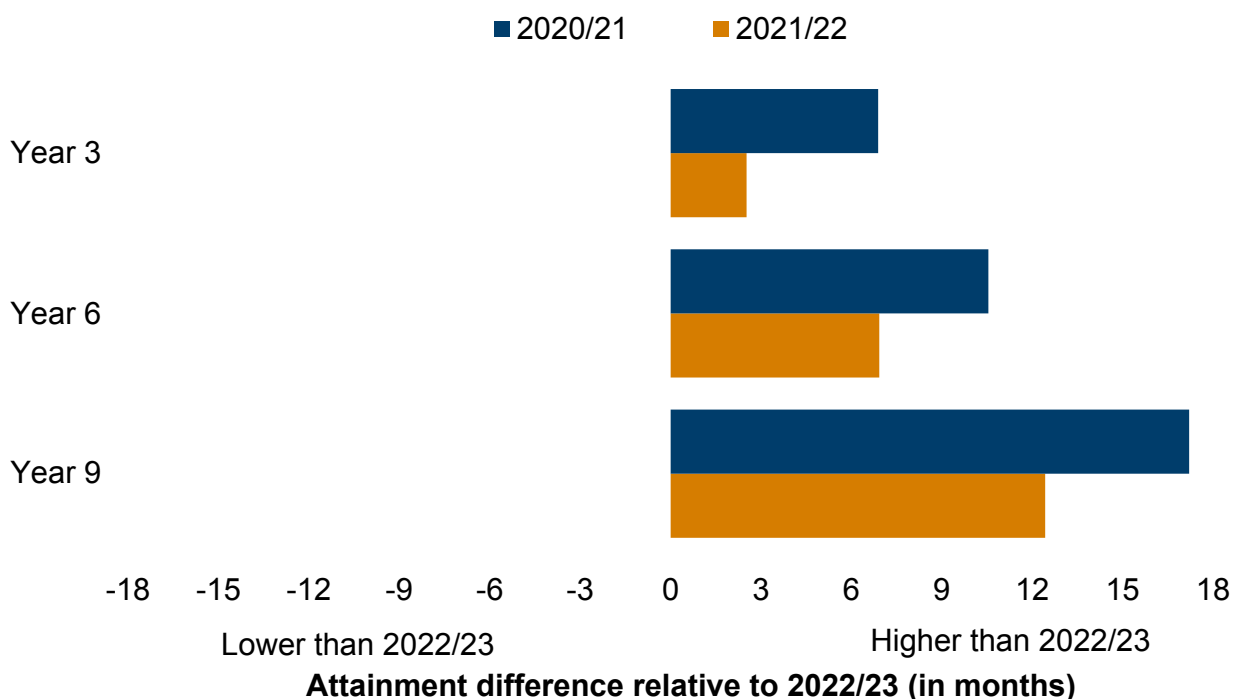
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## Welsh Reading

The Welsh Reading personalised assessments focus on how well pupils understand a text in Welsh and whether they are able to make judgements about what they are reading. The Welsh Reading assessment is taken annually by pupils in Years 2 to 9 whose learning is through the medium of Welsh. The assessment was introduced in the 2019/20 academic year, however there was insufficient data available for that year due to the disruption caused by the coronavirus pandemic, and therefore 2019/20 has not been included in this analysis.

**Figure 2: Welsh Reading: difference in attainment in 2020/21 and 2021/22 relative to 2022/23, in months**



Description of Figure 2: A bar chart showing the average attainment in the

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Welsh Reading assessments of the cohort of pupils who were in Year 3, 6, or 9 in 2020/21 and 2021/22. Average attainment is presented as months higher or lower than the attainment of the same year group in 2022/23 (2022/23 performance is denoted by the zero line on the graph). There is insufficient data for 2019/20, the period most impacted by disruption due to the COVID-19 pandemic; therefore only data for the subsequent three years is used.

## Main points

- In 2021/22, pupils' attainment was lower on average in Welsh Reading relative to pupils in 2020/21, equivalent to 5 months' difference on average across all year groups.
- There was a further decrease in attainment between 2021/22 and 2022/23, equivalent to 7 months' lower attainment on average. This therefore seems to reflect a consistent downward trend over the period for which data is available.
- Both these patterns are consistent in direction across year groups, so we can be reasonably confident they are not solely attributable to the expected minor level of change over time.
- The size of the decline in attainment from 2020/21 to 2022/23 increases as pupil age increases, i.e. the difference is larger for Year 6 than it is for Year 2, and for Year 9 than it is for Year 6.

In summary, in 2022/23 average attainment of pupils in Welsh Reading was lower than it was in 2020/21, equivalent to 12 months' lower attainment.

## English Reading

The English Reading personalised assessments focus on how well pupils understand a text and whether they are able to make judgements about what they are reading in English. The English Reading assessment is taken annually

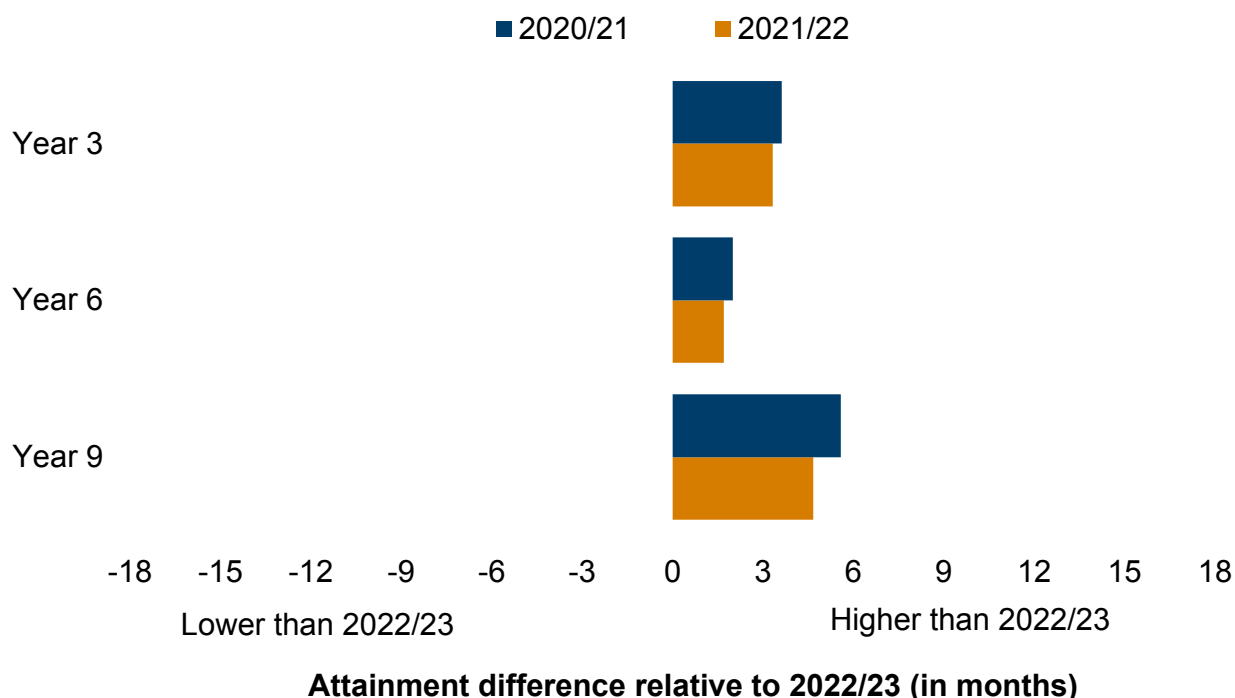
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by pupils in Years 2 to 9 whose learning is through the medium of English. For pupils whose learning is through the medium of Welsh, the English Reading personalised assessment is optional in Years 2 and 3 and mandatory in Years 4 to 9. The English Reading online assessment was introduced in the 2019/20 academic year, however there was insufficient data available for that year due to the disruption caused by COVID-19.

**Figure 3: English Reading: difference in attainment in 2020/21 and 2021/22 relative to 2022/23, in months**



Description of Figure 3: A bar chart showing the average attainment in the English Reading assessments of the cohort of pupils who were in Year 3, 6, or 9 in 2020/21 and 2021/22. Average attainment is presented as months higher or lower than the attainment of the same year group in 2022/23 (2022/23 performance is denoted by the zero line on the graph). Note that while the Reading assessments were introduced in 2019/20, there is insufficient data for

this first year which was the period most impacted by disruption due to COVID-19; therefore, only data for the subsequent three years is used.

## **Main points**

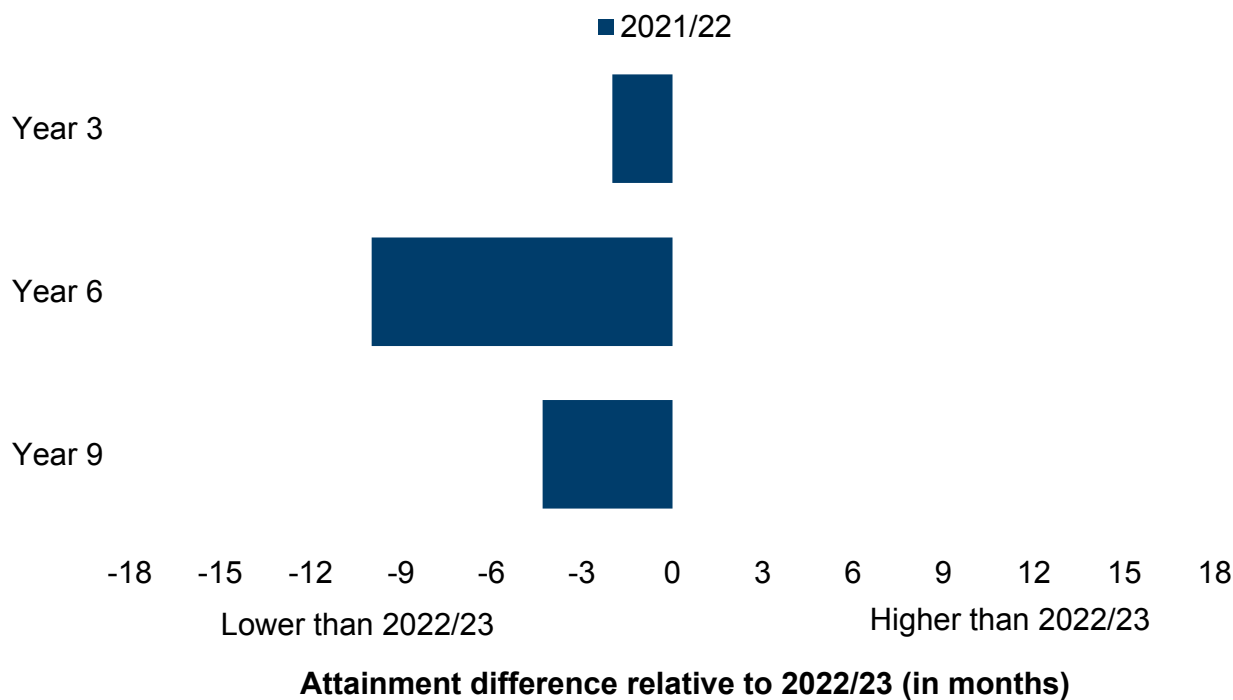
- In 2021/22, English Reading attainment was similar to 2020/21.
- Then between 2021/22 and 2022/23, there was a change; pupils in 2022/23 demonstrated 3 months' lower attainment on average across all year groups compared to pupils in 2021/22.
- This change in 2022/23 was consistent in direction across year groups, so we can be reasonably confident they are not solely attributable to the expected minor level of change over time.

In summary, in 2022/23 average attainment for pupils in English Reading was lower than it was in 2020/21, equivalent to 4 months' lower attainment.

## **Numeracy (Reasoning)**

The Numeracy (Reasoning) personalised assessment focuses on how well pupils can use and apply what they know to solve numerical problems. It is taken by pupils in Years 2 to 9. It was the last assessment to be introduced in the phased roll-out, and data is available for 2 years only: 2021/22 and 2022/23.

**Figure 4: Numeracy (Reasoning): difference in attainment in 2021/22 relative to 2022/23, in months**



Description of Figure 4: A bar chart showing the average attainment in the Numeracy (Reasoning) assessments of the cohort of pupils who were in Year 3, 6, or 9 in 2021/22 (2022/23 performance is denoted by the zero line on the graph). Average attainment is presented as months higher or lower than the attainment of the same year group in 2022/23.

### Main points

- In 2022/23 pupils demonstrated higher attainment in Numeracy (Reasoning), on average and across all year groups, relative to pupils in the same year groups in 2021/22, equivalent to 7 months' difference in attainment.
- This pattern is consistent in direction across year groups, so we can be

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reasonably confident it is not solely attributable to the expected minor level of change over time.

- This may be attributable to pupils becoming more familiar with the Reasoning assessments' novel question types in their second year of use, which evidence from early trialling of these assessments suggests may be occurring.
- Given this possibility and the limited amount of data available for Numeracy (Reasoning), we would caution against interpreting this figure as reflecting a broader trend that will bear out over a longer period.

## Attainment difference by sex

This section of the report breaks down the attainment shown in the above section by sex. It compares the difference in attainment, expressed in months, achieved by males and females for each academic year, for selected year groups. An example of how this breakdown of attainment is worked out can be found in a linked document.

The figures below show patterns for Years 3, 6 and 9 for each of the subjects; data for other year groups is available in the accompanying dataset. Each chart presents the years for which each assessment was in place, except for the year 2019/20 for which there was insufficient data due to the disruption caused by COVID-19.

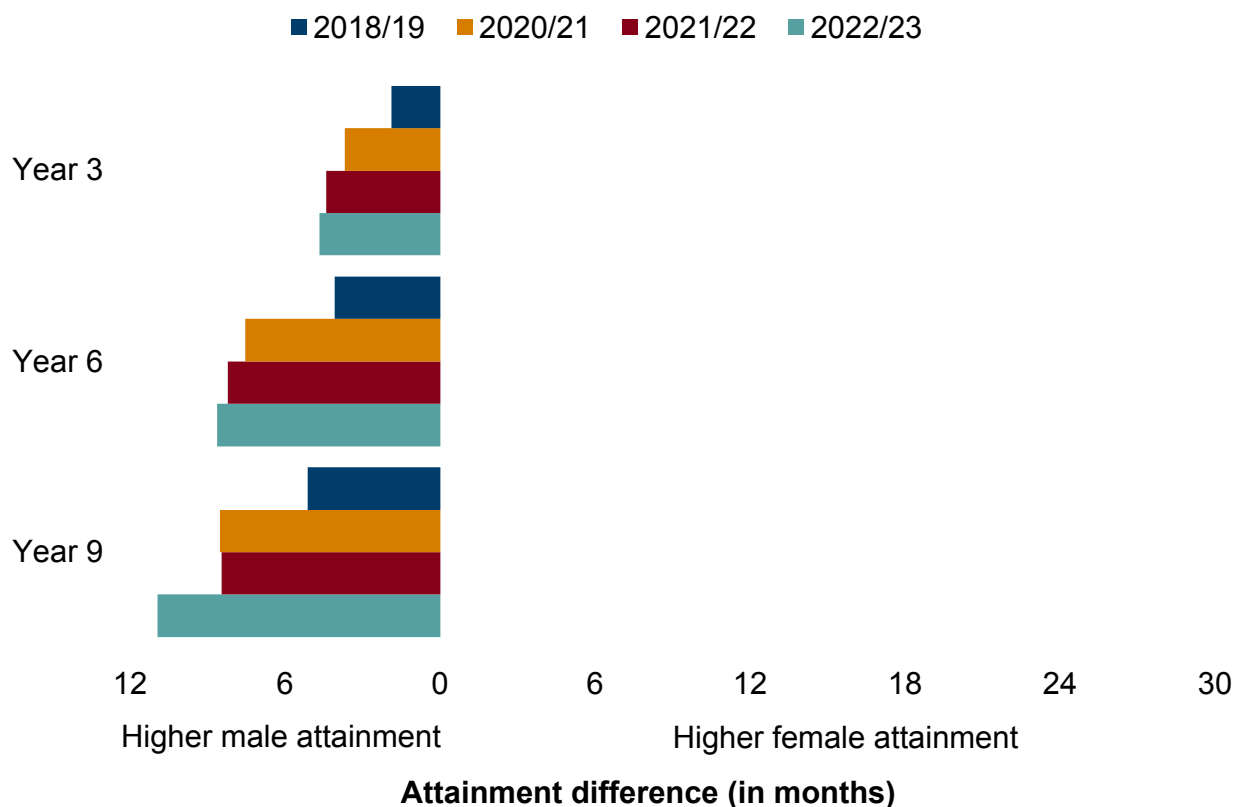
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## Numeracy (Procedural)

**Figure 5: Numeracy (Procedural): Difference in attainment in 2018/19 to 2022/23 between females and males, in months**



Description of Figure 5: A bar chart showing the average difference in attainment between females and males in Numeracy (Procedural), for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as females minus males (with the difference expressed in months). Bars to the right of zero indicate that females outperform males and bars to the left of zero indicate that males outperform females.

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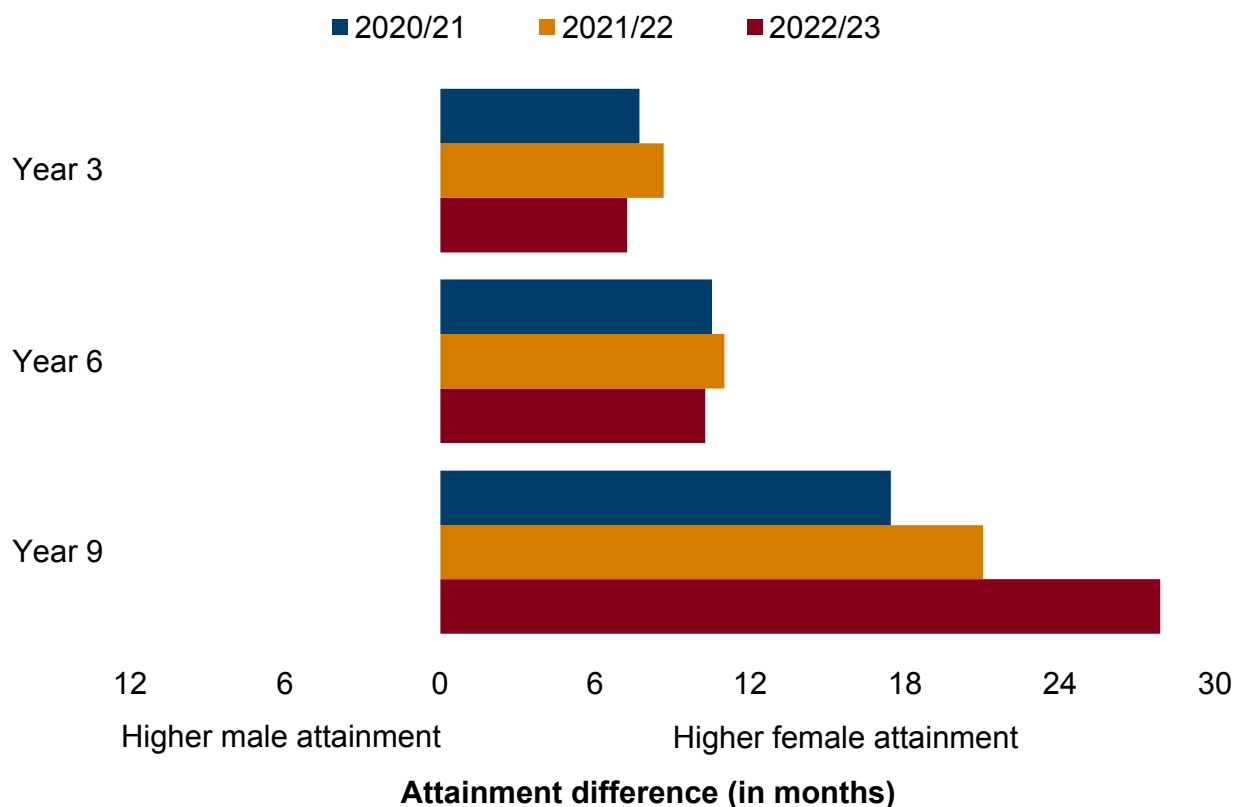
## Main points

- In the Numeracy (Procedural) assessments, males outperform females with what appears to be a consistently widening gap over time across all year groups, from an average of 4 months in 2018/19 to 8 in 2022/23. The largest widening is between 2018/19 and 2020/21, though this is likely to be because there is a two-year time span between measurement points here, due to the COVID-19 pandemic. There is also a notable increase in the average difference for males and females in Year 9 in 2022/23 relative to 2021/22, from 8 to 11 months.
- There is a general pattern for the size of the gap between males and females to increase as pupil age increases, with males outperforming females by steadily greater amounts from Year 2 through to Year 9.



## Welsh Reading

**Figure 6: Welsh Reading: Difference in attainment in 2020/21 to 2022/23 between females and males, in months**



Description of Figure 6: A bar chart showing the average difference in attainment between females and males in Welsh Reading, for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as females minus males (with the difference expressed in months). Bars to the right of zero indicate that females outperform males and bars to the left of zero indicate that males outperform females.

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## Main points

- Females outperform males in this assessment, in all year groups and in all academic years for which data is available.
- The degree to which females outperform males steadily increases as pupils age, with the amount to which females outperform males increasing steadily from Year 2 through to Year 9
- While there is a similar gap for Years 3 and 6 over time, Year 9 demonstrates a notable widening of difference between females and males over time, from 17 months in 2020/21 to 28 in 2022/23.

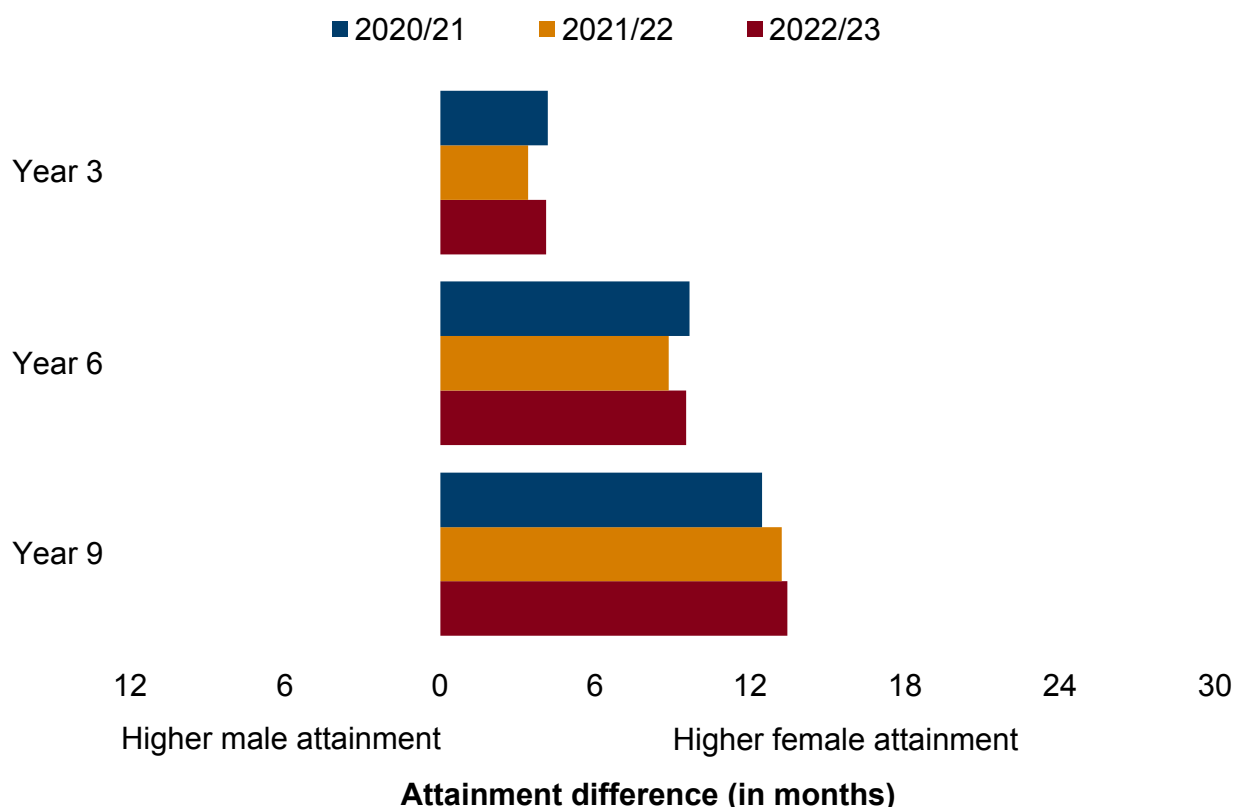
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## English Reading

**Figure 7: English Reading: Difference in attainment in 2020/21 to 2022/23 between females and males, in months**



Description of Figure 7: A bar chart showing the average difference in attainment between females and males in English Reading, for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as females minus males (with the difference expressed in months). Bars to the right of zero indicate that females outperform males and bars to the left of zero indicate that males outperform females.

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## Main points

- Females outperform males in this assessment, in all year groups and in all academic years for which data is available.
- The gap between females and males appears to grow larger as children age, with females steadily outperforming males by greater and greater amounts from Year 2 through to Year 9.
- For English Reading the gap in attainment between females and males has remained fairly consistent in size for each year group over time.

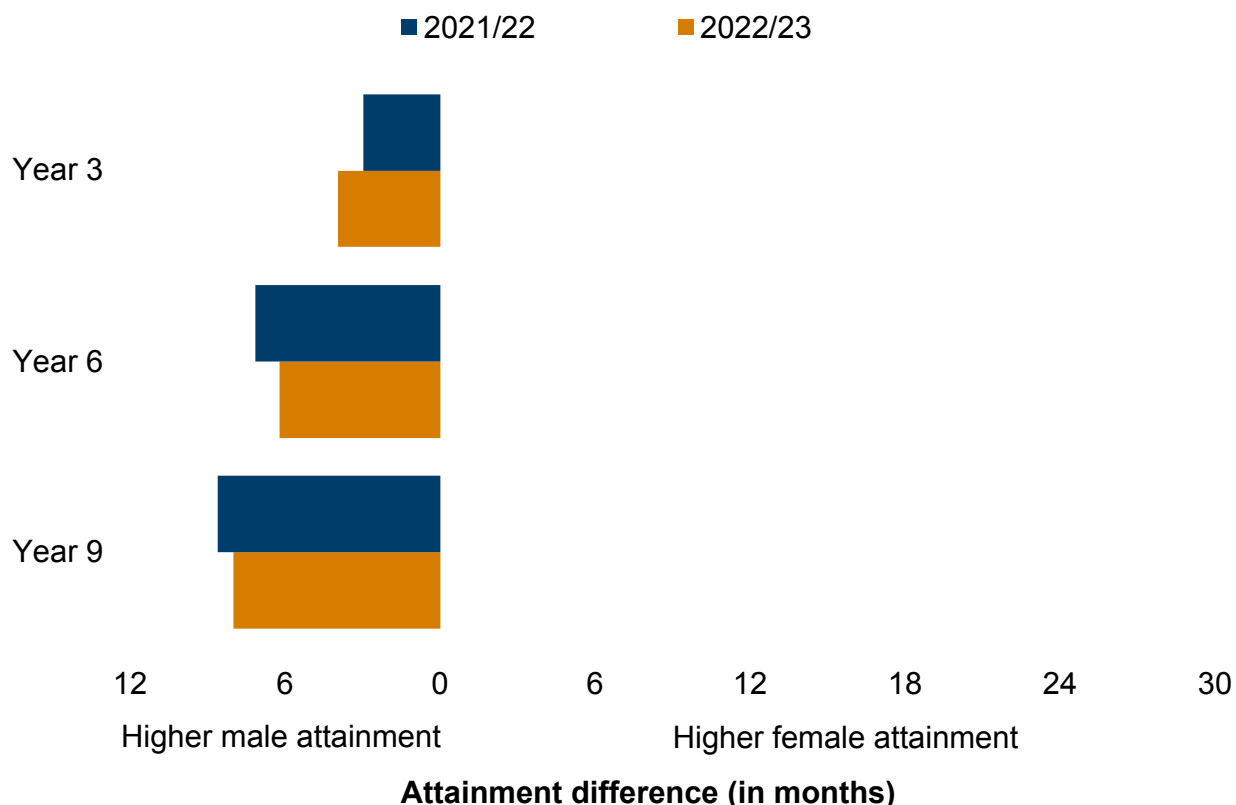
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## Numeracy (Reasoning)

**Figure 8: Numeracy (Reasoning): Difference in attainment in 2021/22 to 2022/23 between females and males, in months**



Description of Figure 8: A bar chart showing the average difference in attainment between females and males in Numeracy (Reasoning), for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as females minus males (with the difference expressed in months). Bars to the right of zero indicate that females outperform males and bars to the left of zero indicate that males outperform females.

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## Main points

- Males outperform females in this assessment, in all year groups and in all academic years for which data is available.
- Males appear to outperform females by greater amounts as pupils age, with the gap between the two sexes increasing steadily from Year 2 through to Year 9.
- For Numeracy (Reasoning) the gap in attainment between females and males stays fairly consistent in size for each year group, since the introduction of this assessment. However, as there are only two years of data available, trends are hard to discern.

## In summary

- In Reading (Welsh and English) there is a difference in favour of females, whilst in Numeracy there is a difference in favour of males, as is the trend in such assessments in many countries. The difference is slightly wider in Reading than Numeracy, averaging the equivalent of 11 months' difference and 6 months' difference respectively, across all year groups and academic years for which data is available.
- Across all subjects, there is a larger difference for older learners compared to younger ones: an average of 1, 2 and 5 months' difference for Years 3, 6 and 9 respectively. Over the academic years for which we have data, the trends vary somewhat between each subject.

# Attainment difference by eligibility for free school meals

This section of the release breaks down the attainment shown in the first section

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by free school meals (FSM) eligibility and reports, in the unit of 'months', the difference in attainment between, pupils who are eligible and pupils who are not eligible for free school meals. This is done in each academic year, for selected year groups. An example of how this breakdown of attainment is worked out can be found in the linked document.

Pupils can currently be **eligible for FSM** if their parents or guardians are in receipt of certain means-tested benefits or support payments, or through the **transitional protection** scheme, or the **universal primary free school meal** policy. For this release we only include pupils who are eligible if their parents or guardians are in receipt of certain means-tested benefits or support payments.

The figures below show patterns in attainment difference for Years 3, 6 and 9 for all subjects; data for other year groups is available in the **accompanying dataset**. Each chart presents the years for which each assessment was in place, except for the year 2019/20 for which there was insufficient data due to the disruption caused by COVID-19.

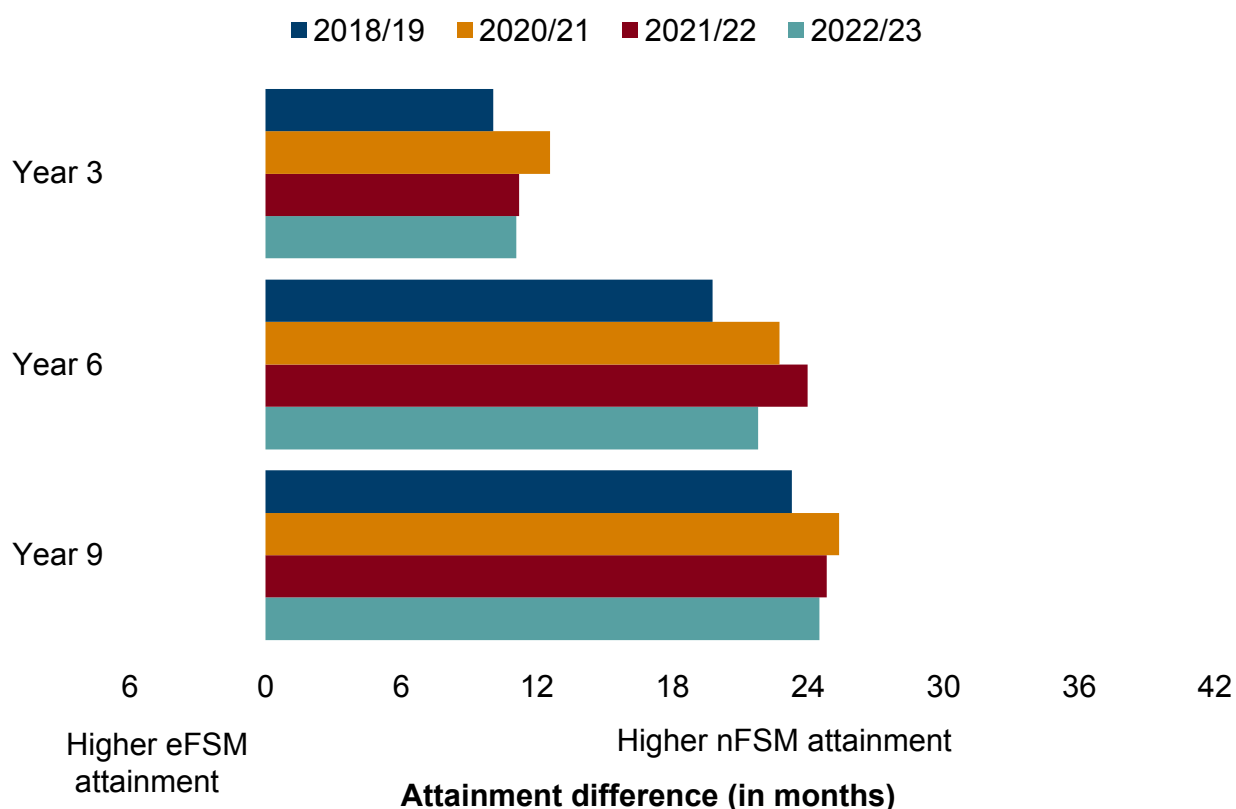
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## Numeracy (Procedural)

**Figure 9: Numeracy (Procedural): difference in attainment in 2018/19 to 2022/23 between pupils eligible (eFSM) and not eligible (nFSM) for free school meals, in months**



Description of Figure 9: A bar chart showing the average difference in attainment between eFSM and nFSM pupils in Numeracy (Procedural), for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as nFSM minus eFSM, in months. Bars to the right of zero indicate that nFSM pupils outperform eFSM pupils, and bars to the left of zero indicate that eFSM pupils outperform nFSM.

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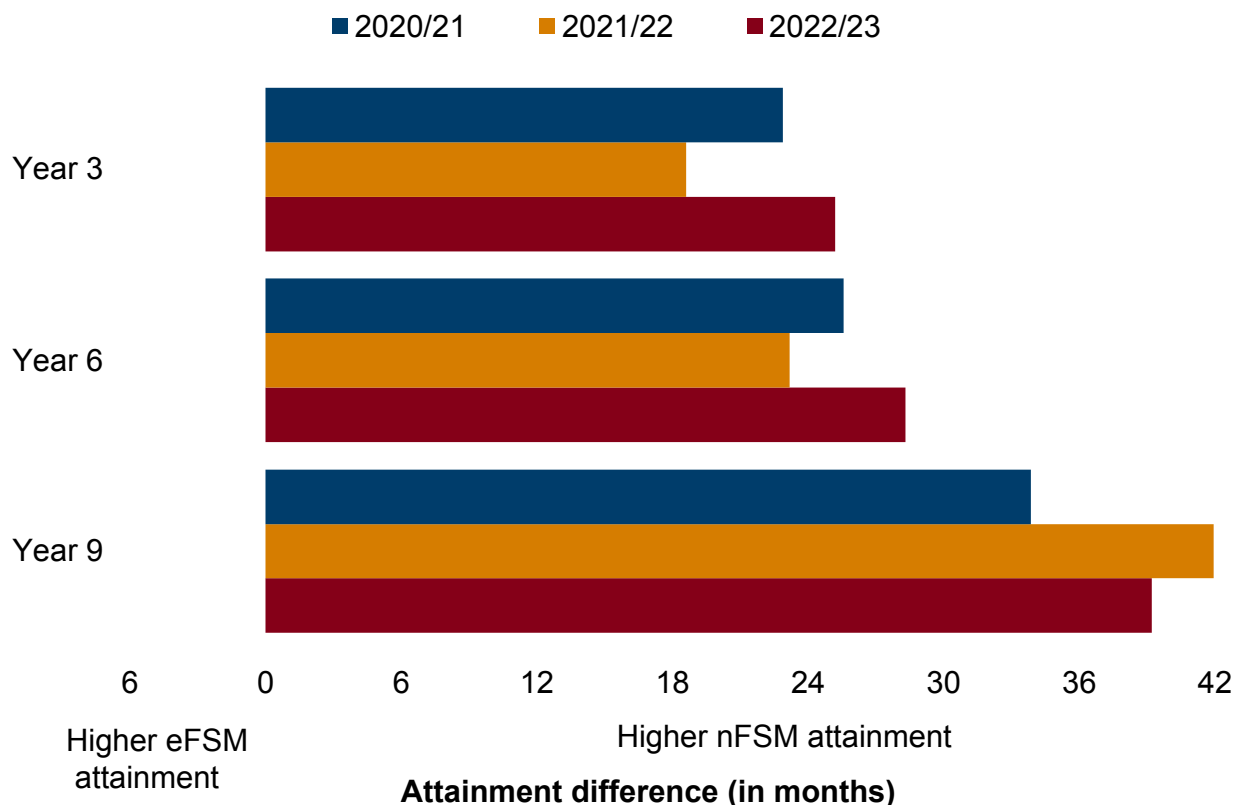


## Main points

- For Numeracy (Procedural), in all year groups and in all academic years for which data is available, pupils not eligible for FSM outperform pupils who are eligible.
- This gap appears to increase in size as pupils age, with non-eligible pupils outperforming eligible ones by greater and greater amounts from Year 2 through to Year 9.
- For Numeracy (Procedural) the difference between the attainment of pupils who are eligible for FSM and those who are not eligible is relatively stable. The slight increase over the academic years most impacted by the COVID-19 pandemic appears to be starting to narrow from 2021/22 to 2022/23. Nonetheless the gap is still slightly larger than pre-COVID, averaging 19 months' progress across all year groups in 2022/23 compared to 18 in 2018/19.

## Welsh Reading

**Figure 10: Welsh Reading: difference in attainment in 2020/21 to 2022/23 between pupils eligible (eFSM) and not eligible (nFSM) for free school meals, in months**



Description of Figure 10: A bar chart showing the average difference in attainment between eFSM and nFSM pupils in Welsh Reading, for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as nFSM minus eFSM pupils, in months. Bars to the right of zero indicate that nFSM pupils outperform eFSM pupils, and bars to the left of zero indicate that eFSM pupils outperform nFSM.

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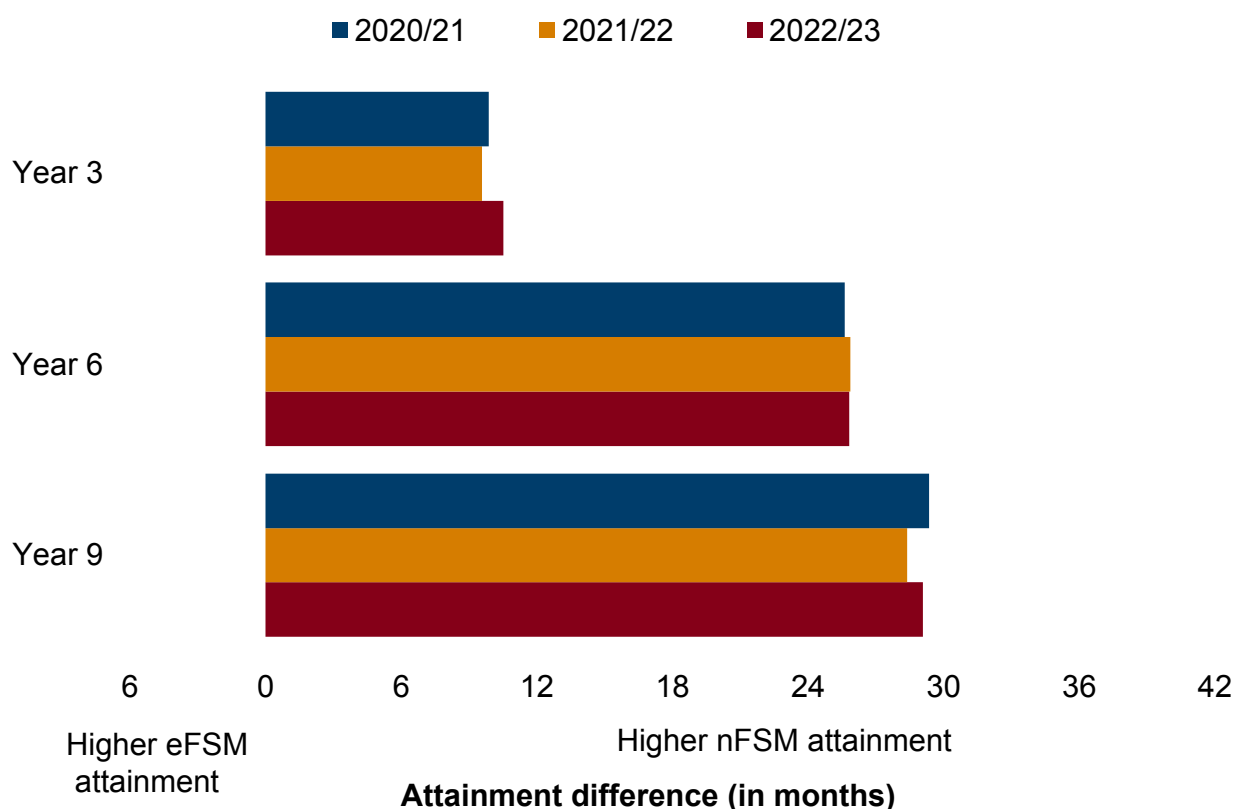
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## Main points

- In all year groups and in all academic years for which data is available for Welsh Reading, pupils not eligible for FSM outperform pupils eligible for FSM.
- This gap appears to increase in size as pupils age, with non-eligible learners outperforming eligible ones by greater and greater amounts from Year 2 through to Year 9.
- For Welsh Reading, the difference widens over time, with a 2022/23 difference of 31 months on average compared to 27 months in 2020/21. The year 2021/22 seems to be an outlier rather than following the increasing trend over time, showing different directions for Years 3 and 6 versus Year 9.

## English Reading

**Figure 11: English Reading: difference in attainment in 2020/21 to 2022/23 between pupils eligible (eFSM) and not eligible (nFSM) for free school meals, in months**



Description of Figure 11: A bar chart showing the average difference in attainment between eFSM and nFSM pupils in English Reading, for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as nFSM minus eFSM pupils, in months. Bars to the right of zero indicate that nFSM pupils outperform eFSM pupils, and bars to the left of zero indicate eFSM pupils outperform nFSM

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## Main points

- In all year groups and in all academic years for which data is available for English Reading, pupils not eligible for FSM outperform pupils eligible for FSM.
- The difference has remained stable since 2020/21. The overall average for each year was around 21 months' difference.

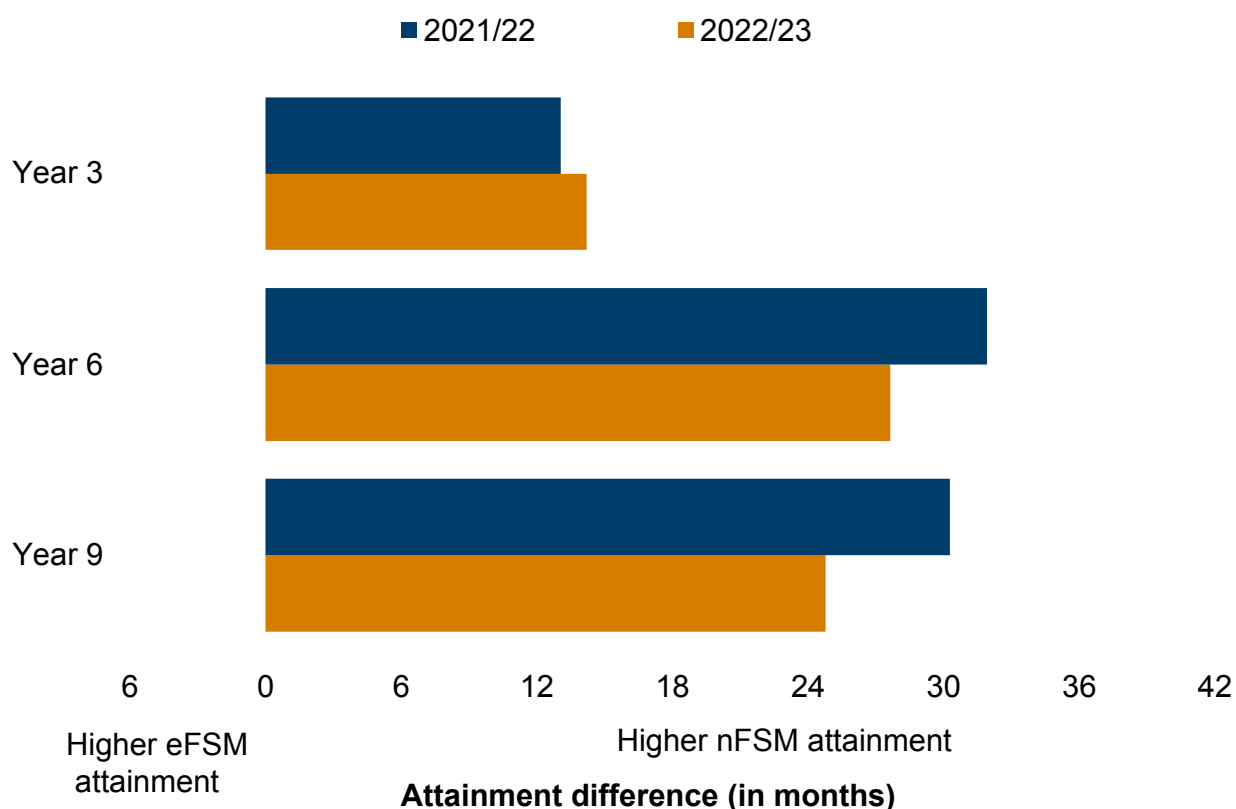
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## Numeracy (Reasoning)

**Figure 12: Numeracy (Reasoning): difference in attainment in 2021/22 to 2022/23 between pupils eligible (eFSM) and not eligible (nFSM) for free school meals, in months**



Description of Figure 12: A bar chart showing the average difference in attainment between eFSM and nFSM pupils in Numeracy (Reasoning), for the cohort of pupils who were in Year 3, 6, or 9 in each academic year. Average attainment difference is presented as nFSM minus eFSM pupils, in months. Bars to the right of zero indicate that nFSM pupils outperform eFSM pupils, and bars to the left of zero indicate that eFSM pupils outperform nFSM.

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## Main points

- In all year groups and in all academic years for which data is available for Numeracy (Reasoning), pupils not eligible for FSM outperform pupils eligible for FSM.
- In the two years for which we have data for Numeracy (Reasoning), Year 3 is fairly stable, but there are larger differences for the other two year groups shown. Averaged across all year groups, the gap is overall narrower in 2022/23 than in 2021/22, at 22 and 25 months in each year, respectively.

## In summary

- In all subjects there is an attainment gap in favour of learners not eligible for FSM. This is a long-established trend across the UK.
- The size of the FSM gap is more consistent across subjects than the difference between males and females but does vary slightly. It averages 21, 29, 24, and 19 months' difference for English Reading, Welsh Reading, Numeracy (Reasoning) and Numeracy (Procedural) respectively, i.e. across all year groups and academic years.
- Across most subjects, there is typically a larger FSM difference for older learners compared to younger ones. Expressed in months, the average difference in attainment is: 14, 25 and 30 months for Years 3, 6 and 9 respectively. (The exception to this is for Numeracy (Reasoning) where the Year 9 gap of 28 is slightly smaller than the Year 6 gap of 30.) However, because there is less absolute change in attainment as learners age, this likely reflects a similar absolute level of FSM difference across year groups - see the [technical section](#) for an explanation.
- Over the academic years for which we have data, the trends vary somewhat between each subject.

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## Further information

This is the second release on reading and numeracy based on national-level data from personalised assessments. It is intended that releases will be made on an annual basis.

## Quality and methodology information

### Statement of voluntary application of the Code of Practice for Statistics

These statistics are not classed as official statistics. However we have applied the principles of the Code of Practice as far as possible during development.

These statistics have been developed at pace and published the earliest possible opportunity to assist users in understanding the patterns of attainment in reading and numeracy for our younger pupils and the potential impact of the coronavirus (COVID-19) pandemic. It has not yet been possible to meet the following requirements for official statistics:

- The month of release of these statistics was pre-announced three months in advance.
- There has been no opportunity to engage with users not working in the education sector to understand what they need from these statistics.

Since the [previous release of these statistics](#) in November 2023 we have:

- Engaged with key users in the education sector to understand what they need from their statistics and to ensure that the presentation and commentary makes the statistics useful and accessible.

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We have voluntarily applied the [Code of Practice for Statistic \(Office for Statistics Regulation \(OSR\)\)](#) as follows.

## Trustworthiness

The data have been extracted from operational systems and tabulated by external contractors with extensive experience in analysing and presenting such information and include professional statisticians. The release has been produced with advice from statisticians who work under the supervision of the Welsh Government Chief Statistician to ensure that the statistics, data and explanatory material is presented impartially and objectively.

Although the publication of these tables has not been pre-announced in the same way as official statistics, they have been published at the earliest opportunity to assist users in understanding patterns of attainment in reading and numeracy over time and the potential impact of the coronavirus (COVID-19) pandemic. This is the first year for which national-level data is available as a time series for all assessment subjects.

All personal data underlying these statistics are processed in accordance with the requirements of the Data Protection Act 2018. We have put in place a thorough governance process with the contractor to ensure that the data are securely managed and reviewed before release.

## Quality

The data in this release originate from the online adaptive personalised assessments taken annually by all pupils in years 2 to 9. This has been matched with demographic data on pupils from our annual school census. Both sources originate from schools and undergo extensive validation both on entry in individual schools and once the data has been received by us. These data

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sources are considered to be of sufficient quality to support this analysis. All stages in the collection, validation and production of these statistics are supported by professional statisticians working for the contractor and statisticians from the Government Statistical Group.

Our data collection tools and processes have been tailored and refined to suit the requirements of these assessments. Established and proven statistical techniques and packages have been used to ensure the robustness of the analysis.

All data are quality-assured prior to publication. The analysis has been verified by independent analysts, and all outputs have passed through multiple rounds of review.

## Value

By summer 2023 pupils in Wales were assessed for the second year in numeracy (reasoning), marking the point at which there were at least two years of data for all four areas that are assessed. This provided sufficient data to be able to present a robust national picture. We have published this release at the earliest opportunity to assist users in understanding patterns of attainment in reading and numeracy over time and the potential impact of the coronavirus (COVID-19) pandemic, particularly amongst our youngest pupils.

The figures have been published in an accessible ODS format which can be shared and reused widely and which complies with the [Government Analysis Function guidance on Releasing statistics in spreadsheets](#). Data are clearly presented in each table, with the spreadsheet also including a cover sheet listing each table. The commentary and notes in the release have been developed to try to make the information as accessible as possible to the widest range of users.

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The data in this release is extracted directly from information made available to schools, pupils and teachers following the completion of the online assessments. This does not place any additional burden on pupils, teachers, schools or local authorities.

This is the second release in what will become an annual official statistics release. Following this release, we will be consulting with key users on the content, timing and accessibility of this release. We will use this feedback to improve subsequent releases.

## Quality

This section provides a summary of information on this output against five dimensions of quality: Relevance, Accuracy, Timeliness and Punctuality, Accessibility and Clarity, and Comparability.

### Relevance

The purpose of personalised assessments is to support progression in reading and numeracy by providing pupils, schools, parents and carers with feedback on skills and progress. At a national level, anonymised data from personalised assessments can also provide information on patterns of attainment and demographic differences which may help support understanding of educational trends in Wales over time.

### Accuracy

The Welsh Government works closely with the supplier appointed by the Welsh Government to deliver the online personalised assessments in order to ensure all data are validated before tables are published. Various stages of automated

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validation and sense-checking are built into the process to ensure a high quality of data.

More information on the nature and administration of the personalised assessments can be found on the [personalised assessments](#) pages of the Welsh Government website.

## **Timeliness and punctuality**

These results are being published at the earliest opportunity to assist users in understanding patterns of attainment in reading and numeracy over time and the potential impact of the coronavirus (COVID-19) pandemic. The assessments covered in this release were undertaken up to the end of the summer term 2023.

## **Accessibility and clarity**

This Statistical Release is pre-announced and then published on the Statistics section of the Welsh Government website. It is accompanied by an Open Document Spreadsheet

## **Comparability**

The personalised assessments have been designed to meet the needs of pupils and teachers in Wales and are not comparable with assessment data for other countries e.g SATS (Standard Assessment Tests) in England.

## **Well-being of Future Generations Act (WFG)**

The Well-being of Future Generations Act 2015 is about improving the social,

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economic, environmental and cultural wellbeing of Wales. The Act puts in place seven wellbeing goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators (“national indicators”) that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before Senedd Cymru. Under section 10(8) of the Well-being of Future Generations Act, where the Welsh Ministers revise the national indicators, they must as soon as reasonably practicable (a) publish the indicators as revised and (b) lay a copy of them before the Senedd. These national indicators were laid before the Senedd in 2021. The indicators laid on 14 December 2021 replace the set laid on 16 March 2016.

Information on the indicators, along with narratives for each of the wellbeing goals and associated technical information is available in the [Well-being of Wales report](#).

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#).

The statistics included in this release could also provide supporting narrative to the national indicators.

## Contact details

Statistician: Steve Hughes  
Email: [school.stats@gov.wales](mailto:school.stats@gov.wales)

Media: 0300 025 8099

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