

# **JUNIPER EDUCATION NATIONAL DATASET REPORT 2022.**

**The impact of the COVID-19  
pandemic on primary  
school children's learning**

A report into primary school attainment based on data from more than 6,000 schools, tracked between autumn 2019 and autumn 2021

The impact of the COVID-19 pandemic on primary school children's learning

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# THE IMPACT OF COVID-19: TWO YEARS OF TURMOIL

On 20th March 2020 the UK government closed schools to the majority of pupils and since that day school life has never been quite the same.

The last two years have seen significant disruption to learning, with Covid lockdowns and high levels of staff and pupil absence limiting normal school activity in so many ways.

Two years is an incredibly long time in a child's development. The last normal academic year of education for a child in Year 3 was their Reception year when they were still getting used to taking turns and listening to their teacher and classmates. Depending on a Year 3 child's experience of the pandemic, some of these learning behaviours may still be a work in progress.

It is a testament to the extraordinary dedication of school leaders, teachers and families that the majority of children have stayed safe, happy and learning throughout the past 24 months of upheaval. But there's no escaping the fact that interruptions to the continuity of face-to-face teaching and a settled school routine mean many pupils have fallen behind where they should be for their age.

In spring 2021 we studied the effects of the first year of COVID-19 in the Juniper Education National Dataset Report, [The impact of the COVID-19 pandemic on primary school children's learning](#).

The 2021 report showed all year groups struggled to reach age related expectations due to the pandemic, but it was the youngest children whose learning saw the most significant drop. The attainment of disadvantaged children and pupils with SEN was also badly affected.

This new report examines the ongoing impact of COVID-19 on primary age pupils two years on.

Based on data from more than 6,000 schools representing over half a million pupils, the report compares the attainment of primary school children in autumn 2019 with the data from autumn 2021. The report sets out to gauge the continuing effects of the pandemic and whether the efforts to implement recovery to children's learning are taking effect.

# KEY FINDINGS

It is two years since the pandemic closed the school gates to the majority of pupils, and during that time there has been significant upheaval as schools and families adjust to each new phase of the crisis. The data in our report shows that the pandemic has taken its toll on primary school children's attainment.

By autumn 2021, the number of primary age children working at or above age-related expectations had not returned to 2019 levels.

The data also reveals that the impact of Covid has not been evenly spread. Some pupil groups have been affected more than others, in particular the youngest children, disadvantaged pupils and children with SEN.

The report highlights the following key findings:

- **Primary school children's attainment has dropped between autumn 2019 and autumn 2021.**

Maths attainment dropped from 79% of children working at levels expected for their age in 2019 to just 69% in 2021 – a fall of 10 percentage points. Reading dropped from 78% to 70%.

- **Year 3 children – who were in Year 1 in 2019 – suffered the biggest drops in attainment during the pandemic.**

In reading, 82% of Year 3s were working as expected for their age in 2019, and by 2021 that figure had dropped to just 68%. In maths, the drop was from 83% in 2019 to 69% in 2021.

- **Writing was the subject hardest hit by the pandemic.**

All year groups have seen bigger drops in writing than in the other subjects. The biggest fall in writing attainment was for Year 3, with only 58% of children working where they should be for their age in writing compared with 79% in 2019 – a drop of 21 percentage points.

- **The gap between disadvantaged and non-disadvantaged pupils has widened over the course of the pandemic.**

The gap in attainment between disadvantaged children and their classmates in all years in reading was 15 percentage points in 2019. This had grown to 19 percentage points in 2021. In maths and writing the gap had widened to 20 percentage points below their non-disadvantaged peers.

- **The gap between younger children with SEN and their classmates has widened during the pandemic.**

For Year 3, the gap in attainment between SEN children and their classmates in reading was 29 percentage points in 2019. This gap had grown to 45 percentage points in 2021.

# METHODOLOGY

The Juniper Education National Dataset collects anonymised teacher assessment data from schools which use its pupil tracking solutions to give percentages of pupils who are achieving, or exceeding what is expected for their age (age related expectations).

We have taken the pre-pandemic baseline of autumn 2019 and we compare that with three further datapoints of autumn 2020, summer 2021 and autumn 2021.

- Autumn 2019 provides an indication of attainment pre-pandemic
- Autumn 2020 gives a snapshot of attainment as lockdown 2.0 takes effect
- Summer 2021 offers insight into the effect of lockdown 3.0 and the spring [roadmap](#)
- Autumn 2021 covers months of disruption due to continuing high levels of infection

The numbers of pupils assessed at each of these datapoints were as follows:

	Number of Pupils Assessed		
	Reading	Writing	Maths
<b>Autumn 2019</b>	577,462	579,085	579,434
<b>Autumn 2020</b>	430,779	428,220	432,275
<b>Summer 2021</b>	610,691	612,429	612,805
<b>Autumn 2021</b>	520,411	512,517	523,572

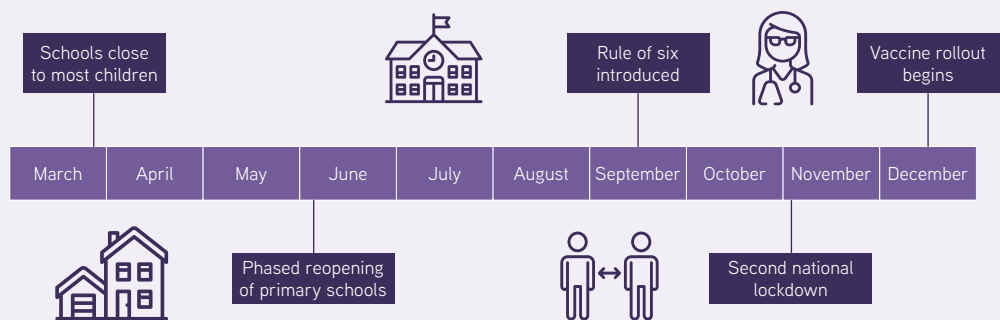
As we are now looking at attainment across three academic years (2019/20, 2020/21 and 2021/22) only certain cohorts have been in primary education that entire time and so can be tracked – **the current Years 3, 4, 5 and 6.**

Unless otherwise identified all analysis in this report will relate to these pupils and we will refer to them by their current (2021/22) year group.

For each datapoint, we have broken attainment data into the following pupil groups:

- Year group
- Pupils with an identified SEN
- Disadvantaged pupils – those who qualify for Pupil Premium which includes looked after pupils, and pupils who have received free school meals at any time in the last six years

# THE OVERALL PICTURE FOR PRIMARY ATTAINMENT IN 2020

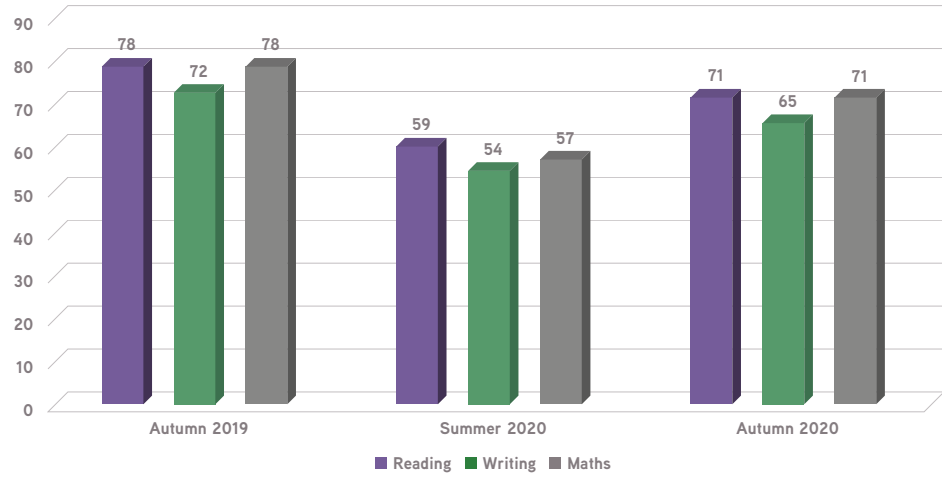


When the pandemic hit in spring 2020 the top priority was to ensure the safety of pupils, staff and school communities, and many schools had little or no experience of remote teaching and learning.

The Juniper National Dataset 2021 [report](#) which we published this time last year reflected the effects of that sudden, unexpected interruption to formal education. The percentages of children in Years 2 to 6 who were achieving at or above the standard expected for their age dropped between autumn 2019 and summer 2020. Maths was the worst hit subject in 2020 with an attainment drop of 21 percentage points from 78% in autumn 2019 down to 57% in summer 2020.

As teaching returned to the classroom for most children and we looked forward to the prospect of a more settled school life, our autumn 2020 data released in that report showed the recovery was underway.

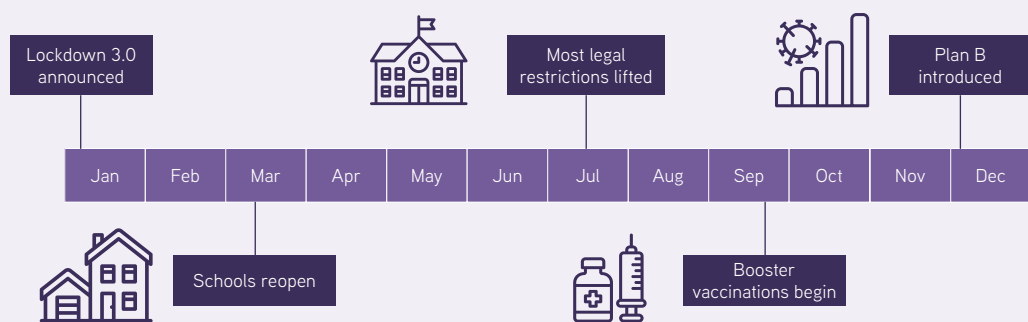
### Percentage of pupils in Years 2 to 6 in 2020/21 who are at or above age-related expectations



Data revealed in last year's benchmark report

However, a year on and a new set of data has revealed little evidence of that recovery taking hold as the pandemic continued to disrupt our lives.

# THE OVERALL PICTURE FOR PRIMARY ATTAINMENT IN 2021



So how does primary school children's attainment in 2021 compare?

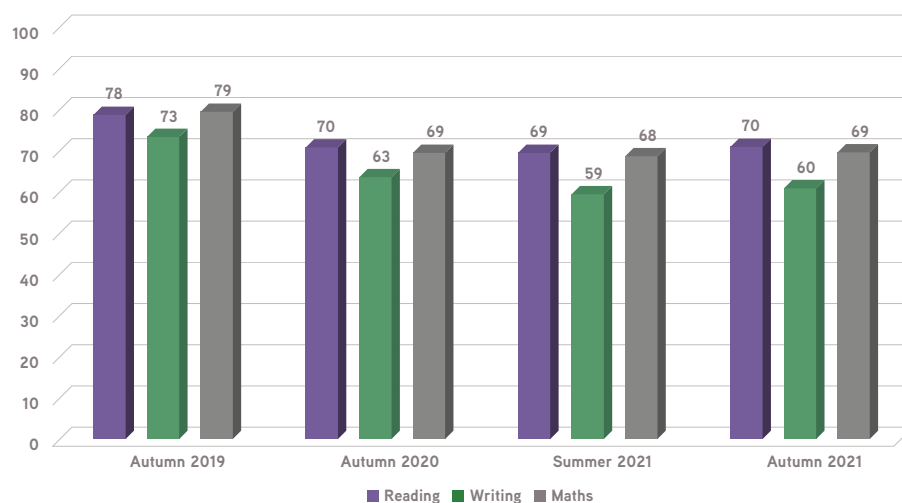
It turned out to be another year of disruption with further school closures, tiered restrictions and pupil bubbles. As a result, attainment levels in 2021 are well below those in 2019.

Overall there was a 13 percentage point drop in the number of primary school pupils working at age related expectations in writing, down from 73% in autumn 2019 to 60% in autumn 2021. Maths attainment dropped by 10 percentage points from 79% to 69% and reading by eight percentage points from 78% to 70%.

By autumn 2021 only three fifths (60%) of primary school children in Years 3 to 6 were working at expected levels in writing compared with 73% in 2019.



### Percentage of pupils in Years 3 to 6 in 2021/22 who are at or above age-related expectations



Our teacher assessment data by age of pupil uncovers some key differences in the effects of the pandemic on the different pupil groups.

### Percentage of pupils in Years 3 to 6 working at or above age-related expectations by year group

Year (21/22)	Subject	Autumn 2019	Autumn 2021	Change
3	Reading	82	68	-14
3	Writing	79	58	-21
3	Maths	83	69	-14
4	Reading	77	69	-8
4	Writing	72	59	-13
4	Maths	78	69	-9
5	Reading	77	71	-6
5	Writing	71	61	-10
5	Maths	78	69	-9
6	Reading	77	73	-4
6	Writing	70	63	-7
6	Maths	77	70	-7

There have been steep drops in the attainment of Year 3 and 4 pupils – these were the children in Years 1 and 2 in 2019/2020. These pupils will need sustained and targeted support to give them the learning tools they have missed out on over the course of the pandemic.

Children in the later primary years have fared rather better. The drops in attainment between autumn 2019 and autumn 2021 for Year 6 children were lower than for other age groups. Year 6 have retained higher attainment in reading with only a four percentage point fall in children achieving what they should be in reading, from 77% in 2019 down to 73% in 2021.

This could be due to the fact that older primary school children have been able to catch up on their age-related achievement more swiftly than younger children as they are able to learn more independently and are building on a richer bank of established numeracy and literacy skills.

# YOUNGEST CHILDREN'S ATTAINMENT HAS SUFFERED THE MOST

The youngest primary school children have not had the opportunity to build their learning skills in the same way as usual during the last two years. For the Year 3 child whose last normal school year was Reception, the ability to sit quietly, edit their own work or write for a sustained period of time may not be well established.

Disruption to education at this critical time when children are laying the foundations for learning could explain why the youngest children have been affected the most.

**Nearly a third of all Year 3 children have not met age related expectations in reading, writing or maths.**

For today's Year 3 pupils, performance in writing fell from 79% in autumn 2019 to 58% in autumn 2021 which is a drop of 21 percentage points. In reading, attainment fell from 82% to 68% over the same time period which is a 14 percentage point drop. For maths, the drop in attainment was also 14 percentage points from 83% to 69%.

# WRITING HAS BEEN HARDEST HIT

All year groups have seen bigger drops in writing than in the other subjects. Year 4 children's attainment fell from 72% in autumn 2019 to 59% in autumn 2021, a drop of 13 percentage points. For Year 5 children the drop was from 71% to 61%, and for Year 6 the drop was from 70% to 63%.

However, the biggest drop in writing was for Year 3, with only 58% of children working where they should be for their age in writing compared with 79% in 2019 – a drop of 21 percentage points.

All year groups have seen bigger drops in writing than in the other subjects.

# IMPACT ON DISADVANTAGED CHILDREN

Covid has had a more damaging impact on disadvantaged children than their peers.

Data from autumn 2021 reveals that the gaps between disadvantaged and non-disadvantaged children have widened since the start of the pandemic. This is more pronounced in maths and the younger age groups.

In all year groups and subjects the gaps between disadvantaged and non-disadvantaged children have widened.

## Maths

Percentage of disadvantaged and non-disadvantaged children who are working at or above age-related expectations

Year	Autumn 2019			Autumn 2021			
	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	Gap Change
3	75	85	10	53	73	20	10
4	66	81	15	54	74	20	5
5	67	81	14	55	74	19	5
6	65	81	16	56	75	19	3
<b>All</b>	<b>68</b>	<b>82</b>	<b>14</b>	<b>55</b>	<b>74</b>	<b>20</b>	<b>6</b>

All numbers rounded to nearest integer

In Autumn 2019, 68% of disadvantaged children were working at or above age-related expectations in maths compared to 82% of their peers – a 14 point gap. By Autumn 2021, these figures had widened to a 20 point gap.

Maths is the subject for which the gap between disadvantaged children and their peers has widened the most between 2019 and 2021.

## Writing

Percentage of disadvantaged and non-disadvantaged children who are working at or above age-related expectations

Autumn 2019				Autumn 2021			
Year	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	Gap Change
3	70	82	12	42	63	21	9
4	59	76	17	43	64	21	4
5	58	75	17	46	66	20	3
6	56	74	18	49	68	19	1
<b>All</b>	<b>61</b>	<b>77</b>	<b>16</b>	<b>45</b>	<b>65</b>	<b>20</b>	<b>4</b>

All numbers rounded to nearest integer

In writing, a similar story emerges from the data. Pre-pandemic, only 61% of disadvantaged children were working at or above age-related expectations compared to 77% of their peers – a 16 point gap. By Autumn 2021, these figures had widened to a 20 point gap difference at 45% and 65% respectively.

In 2021, fewer than half of all primary age disadvantaged children (45%) were working at or above age-related expectations in writing, down from 61% in 2019.

## Reading

Percentage of disadvantaged and non-disadvantaged children who are working at or above age-related expectations

Autumn 2019				Autumn 2021			
Year	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	Gap Change
3	73	84	11	53	73	20	9
4	65	81	16	55	74	19	3
5	66	81	15	57	75	18	3
6	65	81	16	61	78	17	1
<b>All</b>	<b>67</b>	<b>82</b>	<b>15</b>	<b>57</b>	<b>75</b>	<b>19</b>	<b>4</b>

All numbers rounded to nearest integer

In autumn 2019, 67% of disadvantaged children were working at or above age-related expectations in reading compared to 82% of their peers – a gap of 15 points. That figure dropped to 57% in autumn 2021 – a gap of 19 points.

## Youngest children

Disadvantaged children in Year 3 are a particular cause for concern. In autumn 2019, the gaps between disadvantaged children and their peers were smallest for the current Year 3s (Year 1 in 2019) at between 10 and 12 percentage points below their peers. Two years later, disadvantaged children in that cohort were trailing 20% percentage points or more below their peers in all areas covered in the study.

### Difference in the attainment gap for disadvantaged children between 2019 and 2021 in year 3

Autumn 2019				Autumn 2021			
Year	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	% disadvantaged children at/above age-related expectations	% non-disadvantaged children at/above age-related expectations	Gap	Gap Change
<b>Reading</b>				<b>Reading</b>			
3	73	84	11	53	73	20	9
<b>Writing</b>				<b>Writing</b>			
3	70	82	12	42	63	21	9
<b>Maths</b>				<b>Maths</b>			
3	75	85	10	53	73	20	10

All numbers rounded to nearest integer

The pandemic has widened existing inequalities throughout the country in so many ways, and this data provides yet more evidence of the damage done by COVID-19. Schools will need long-term strategies to support children from disadvantaged backgrounds who have been disproportionately affected by two years of disruption.

# IMPACT ON CHILDREN WITH SEN

Many children with SEN receive additional support at school, but with long periods of time out of the classroom, and staff absences due to Covid, it may have been difficult for schools to maintain pre-pandemic levels of support. This is particularly true for younger children.

Overall, the attainment of children with SEN in all years has dropped compared with 2019 levels, with the exception of year 6 reading.

In autumn 2019, 42% of children with SEN were working at or above age-related expectations in reading. That figure dropped to 33% in autumn 2021. The corresponding drops for writing were 35% in 2019 down to 22% in 2021, and for maths they were 45% down to 34%.

The gap between children with SEN and their classmates has widened during the pandemic for Year 3s, but reduced for Years 5 and 6.

## Reading

### Percentage of children with SEN and children without who are at or above age-related expectations

Year	Autumn 2019			Autumn 2021			
	% children with SEN at/above age-related expectations	% children without SEN at/above age-related expectations	Gap	% children with SEN at/above age-related expectations	% children without SEN at/above age-related expectations	Gap	Gap Change
3	57	86	29	30	75	45	16
4	39	84	45	30	77	47	2
5	37	85	48	32	79	47	-1
6	36	85	49	38	81	43	-6
<b>All</b>	<b>42</b>	<b>85</b>	<b>43</b>	<b>33</b>	<b>78</b>	<b>46</b>	<b>3</b>

All numbers rounded to nearest integer

The difference in reading attainment between Year 3 pupils with SEN in Autumn 2019 was 29 percentage points. In Autumn 2021, Year 3 children with SEN were 45 percentage points behind their peers.

Year 6 pupils with SEN fared a little better and managed to narrow the attainment gap in comparison to their peers by six points.

## Writing

Year	Autumn 2019			Autumn 2021			
	% children with SEN at/above age-related expectations	% children without SEN at/above age-related expectations	Gap	% children with SEN at/above age-related expectations	% children without SEN at/above age-related expectations	Gap	Gap Change
3	54	83	29	21	65	44	15
4	32	80	48	20	66	46	-2
5	28	79	51	22	69	47	-4
6	26	79	53	25	71	46	-7
<b>All</b>	<b>35</b>	<b>80</b>	<b>45</b>	<b>22</b>	<b>68</b>	<b>46</b>	<b>1</b>

All numbers rounded to nearest integer

Year 3 children with SEN fared poorly in writing too. 54% were achieving age related expectations in Autumn 2019. That dropped to only 21% in Autumn 2021 – a gaping 44 percentage points behind their peers.

## Maths

Year	Autumn 2019			Autumn 2021			
	% children with SEN at/above age-related expectations	% children without SEN at/above age-related expectations	Gap	% children with SEN at/above age-related expectations	% children without SEN at/above age-related expectations	Gap	Gap Change
3	59	87	28	33	75	42	14
4	41	84	43	33	76	43	0
5	40	85	45	33	77	44	-1
6	39	85	46	35	77	42	-4
<b>All</b>	<b>45</b>	<b>85</b>	<b>41</b>	<b>34</b>	<b>76</b>	<b>43</b>	<b>2</b>

All numbers rounded to nearest integer

Year 3 maths achievement for SEN pupils was 42 percentage points behind their peers in comparison to just a 28 percentage point gap two years previously.



# SIGNS OF RECOVERY?

There is no doubt that the pandemic has had a damaging effect on primary school children’s attainment which will take time, expertise and strategic thinking to overcome. Particularly for the younger pupils. However, the data identifies some early signs of recovery in older year groups, and there is hope that we can start to look ahead to a more optimistic picture.

We look at the data by school year below.

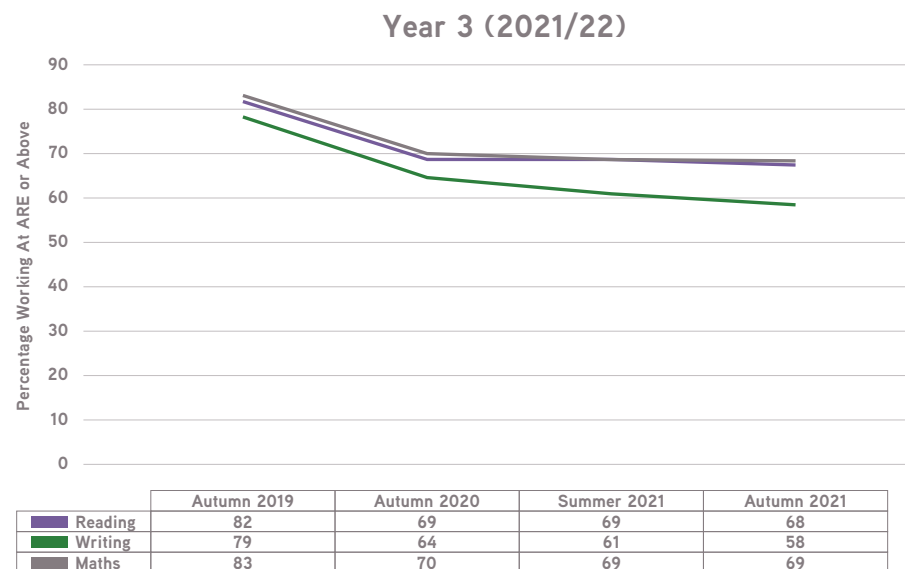
## Year 3

The data indicates that the youngest children are yet to show signs of recovery in attainment. For Year 3, the number of pupils working at expected levels for their age has dropped progressively at each of four datapoints between 2019 and 2021. The only exception is maths which remained at 69% in both summer and autumn 2021.

Percentage of pupils who are at or above age-related expectations: autumn 2019, summer 2020 and autumn 2020

Maths was the only subject which did not drop between summer 2021 and autumn 2021 for Year 3

## Year 3 attainment from autumn 2019 to autumn 2021



## Years 4 & 5

However, for children in Years 4 and 5, there are some very early signs of recovery.

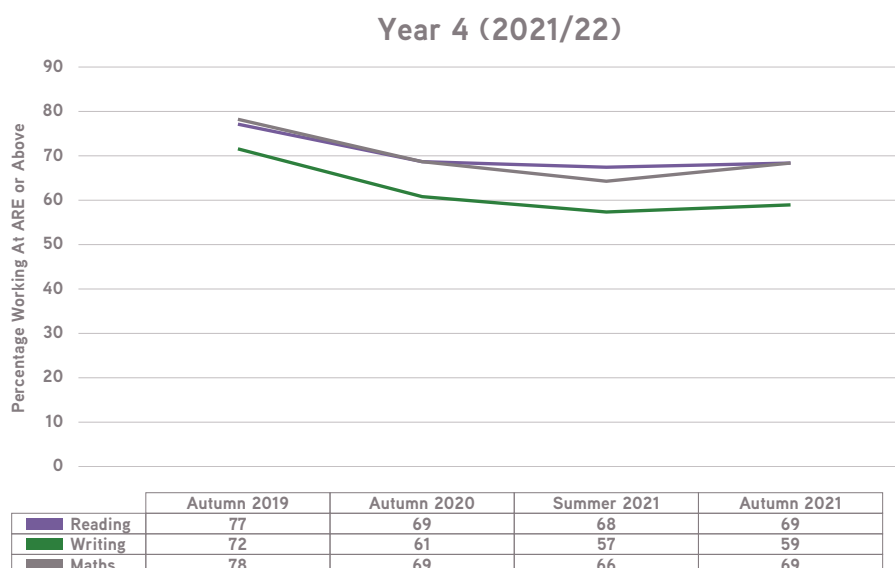
Attainment levels dropped between autumn 2019 and summer 2021, but the autumn 2021 figures show a slight bounce in the percentage of children working at the expected levels for their age.

Once again, writing is the subject which has suffered the most, but attainment in writing started from a lower pre-pandemic base.

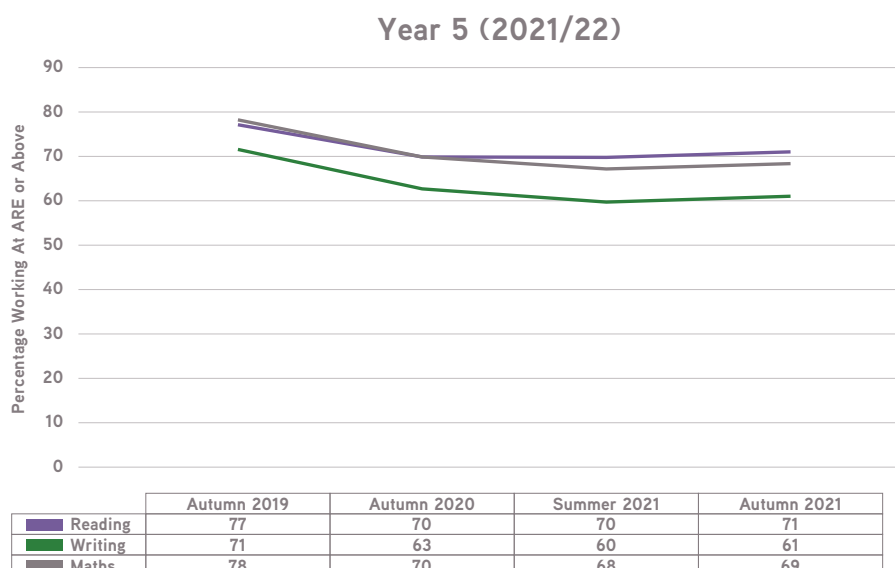
Year 4 writing attainment increased from 57% in summer 2021 to 59% in autumn 2021, while Year 5 writing increased from 60% in summer 2021 to 61% in autumn 2021

Although small, these increases in attainment are a positive move in the right direction.

### Year 4 attainment from autumn 2019 to autumn 2021



### Year 5 attainment from autumn 2019 to autumn 2021



## Year 6

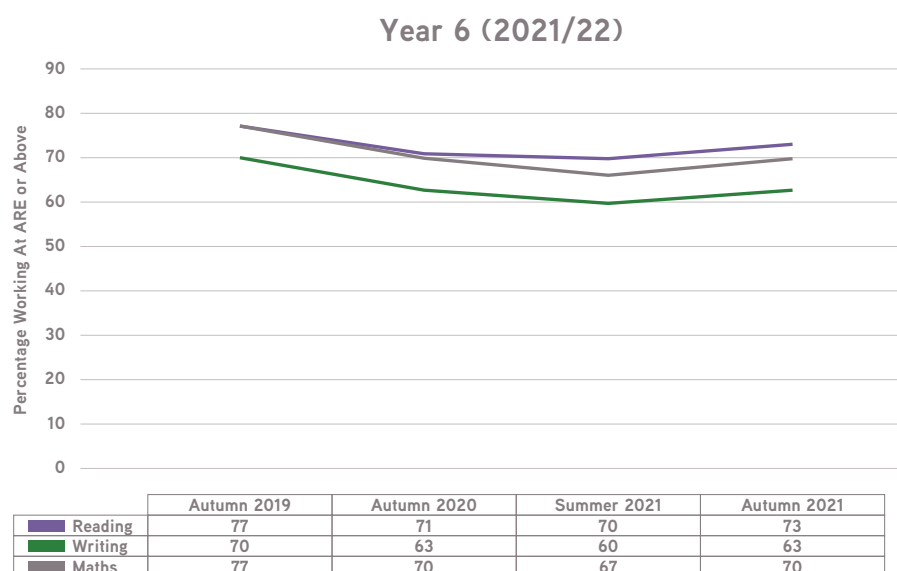
There was a more pronounced recovery for Year 6 with a three percentage point increase in children working at age related levels between summer 2021 and autumn 2021 in each of the three subjects.

Reading attainment increased from 70% in summer 2021 to 73% in autumn 2021. Writing attainment rose from 60% in summer 2021 to 63% in autumn 2021 and maths attainment went up from 67% in summer 2021 to 70% in autumn 2021.

**Year 6 reading attainment in autumn 2021 is only four percentage points lower than it was before the pandemic.**

The lower drop in reading could be due to Year 6 children having a more developed ability to learn and read independently.

### Year 6 attainment from autumn 2019 to autumn 2021



This tells us that the older primary school children may already be taking the first steps towards catching up with their attainment. This could develop into a more sustained recovery, depending, of course, on what the next phase of the pandemic has in store for us.

For the Year 3s who are bearing the brunt of the pandemic, recovery could be somewhat slower to take hold. However, the attainment drops are tailing off, and with the care, support and inspiration of their dedicated teachers, there is reason to believe that these children will soon be making up for lost time.

# CONCLUSION

All primary year groups have been affected by the prolonged disruption of the pandemic, however, it is the youngest children whose learning has been hit the hardest. Fewer Year 3 children reached age related expectations, and the recovery for this cohort will be a steeper uphill journey than for their older counterparts.

For the current Year 3s, whose last normal year of schooling was when they were in Reception, there are bound to be gaps in the building blocks of their early education. Many children in this year group have not had the chance to form secure numeracy and literacy skills, and their ability to sit still, listen and concentrate may not be fully developed.

The subject which has seen the biggest drops and the slowest recovery is writing. This is true across all year groups, but particularly for Year 3. Attainment in writing was lower than in reading and maths even before the pandemic, and attainment levels have fallen further. While teachers and parents have done amazing work supporting primary school pupils' writing, the pandemic may have taken its toll on children's stamina for putting pen to paper for longer periods of time.

Sadly, Covid has continued to create deeper divides between children from disadvantaged backgrounds and their peers, with the attainment gaps growing for all primary cohorts, and wider gaps forming for Year 3s.

However, it is encouraging to see that some of the gaps for children with SEN are closing, particularly for children in Year 6.

It is the Year 6 cohort which has shown the greatest resilience in learning, with more children achieving at or above age-related expectations throughout the crisis. There are glimmers of hope too for a swifter recovery to pre-pandemic levels in this group as they prepare for their transition to secondary education.

While there is a long and bumpy road ahead, the positive news is that primary attainment has not fallen too much further from autumn 2020 levels despite another year of upheaval, uncertainty and interruption to face-to-face teaching.

Having lived through another extraordinary year, teachers and school leaders have become even more skilled at adapting to the unexpected and have developed creative and sustainable strategies to help their pupils make up for lost ground. These strategies will serve schools well whatever the future brings.

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