The value of diagnostic assessment in a time of COVID

Schools and Academies Show

Liz Twist

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l.twist@nfer.ac.uk

Summary

Evidence-base on impact of C-19 on learning

What we mean by diagnostic assessment

Example of diagnostic assessment

Examples of diagnostic assessment from time of C-19

Evidence base

Historically – nothing comparable

Education Endowment Foundation (EEF) overview

https://educationendowmentfoundation.org.uk/covid-19-resources/best-evidence-on-impact-of-school-closures-on-the-attainment-gap/

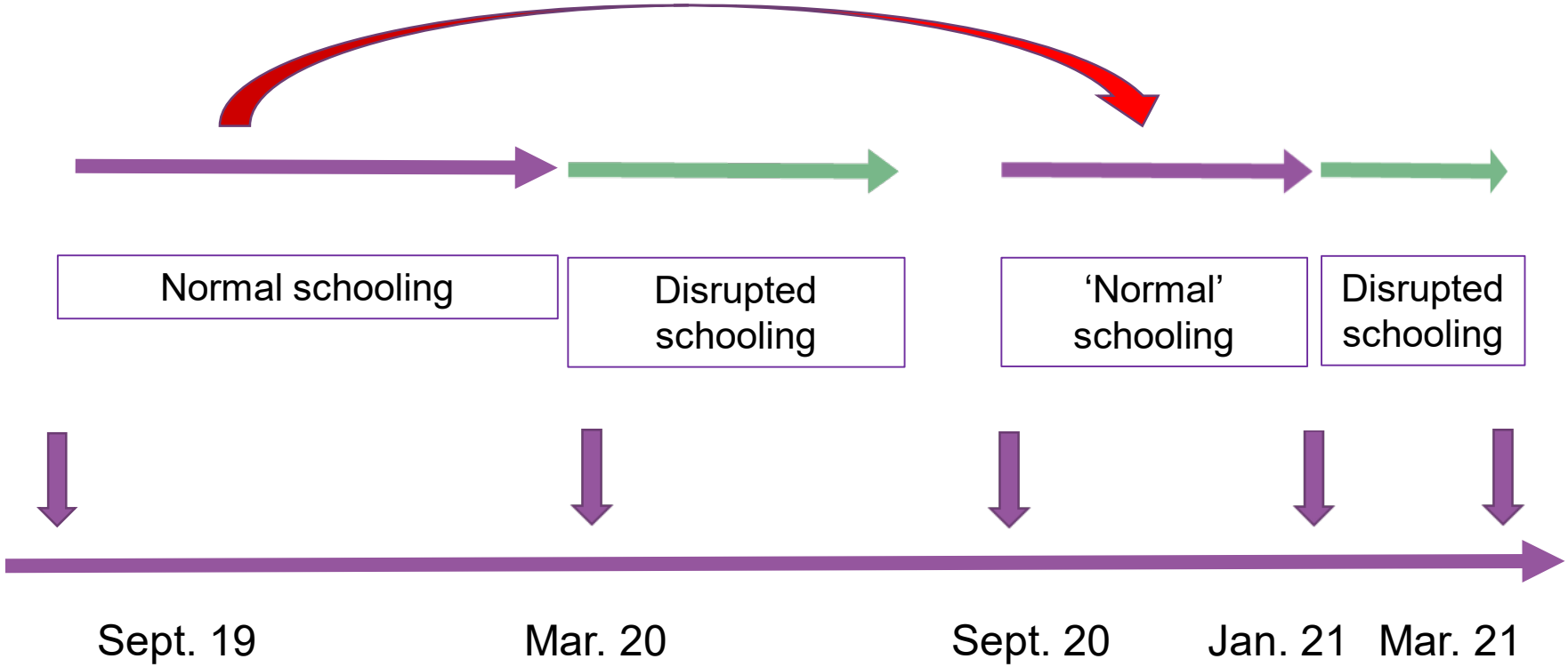
Repeated findings (attainment)

1 or 2 months less progress – reading and maths

Disadvantage associated with greater impact

Short term; impact 1+ years unknown

Measuring impact of disruption



Summary

Pupils are learning and making progress!

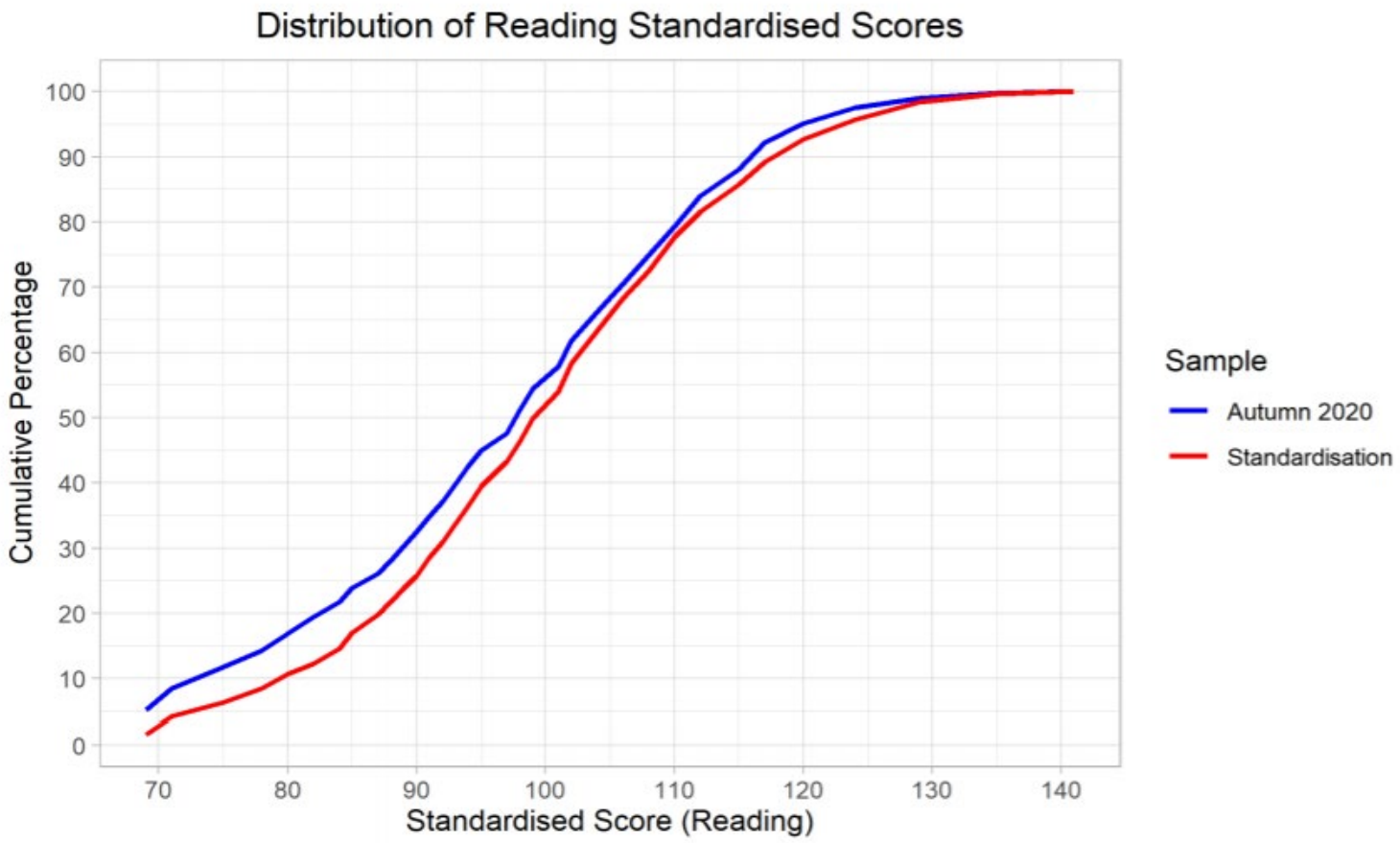
But at a slightly slower rate, overall, than in previous (non-C-19) years

However, impact is greater (i.e. progress is slower, relative to previous years), for lower attaining pupils

Impact seems possibly greater for disadvantaged pupils

Recovery / long term impact – not yet known

Differential impact



NFER / EEF on-going study

Y1 and Y2 (N = ~12,000 pupils), 160+ schools, England

Tests in reading and maths

	Nov. 20	March 21	July 21
Year 1		✓	✓
Year 2	✓	✓	✓

Assessment of socio-emotional learning (subset of pupils)

Survey of catch-up activities (teachers)

Diagnostic assessment

"I … use the term 'diagnostic' for those assessments that provide information about the difficulties that a student is experiencing, and 'formative' for those that provide feedback to learners about how to go about improving."

Dylan Wiliam (2000)

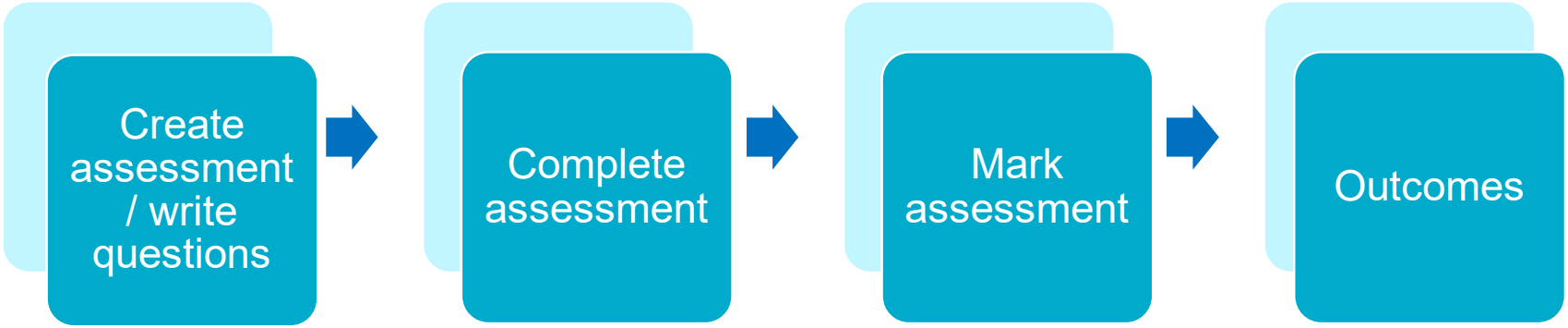
"Effective teachers have always understood that mistakes and confusion are powerful learning opportunities."

Steven Leinwand, AIR (nd)

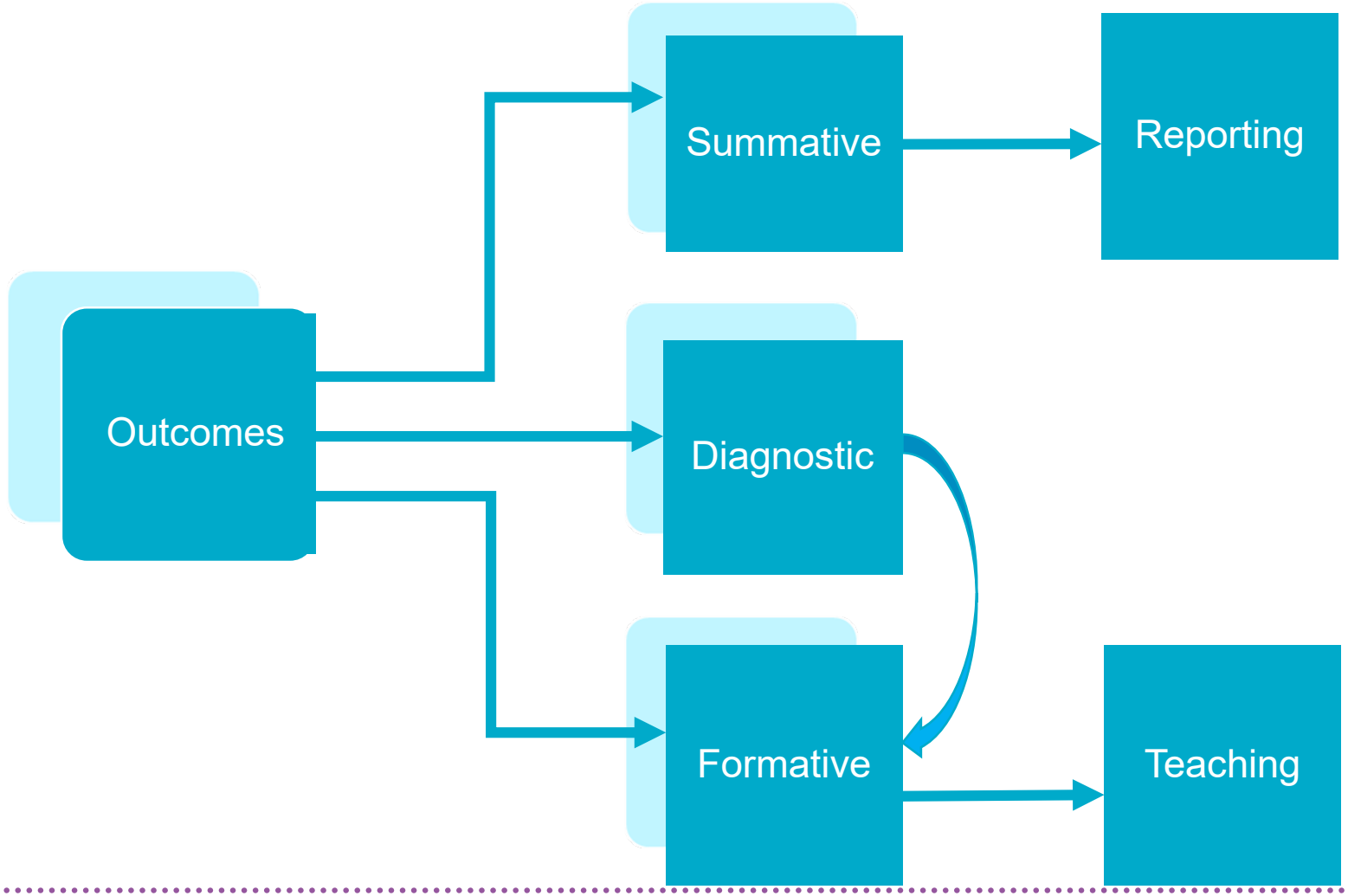
"Diagnostic assessment is a crucial tool in a teacher's toolkit to help understand the specific areas of strength and weakness in learning."

Education Endowment Foundation (2019)

Comparing diagnostic and formative assessment



Comparing diagnostic and formative assessment



Diagnostics addressing key misconceptions – mathematics

Lola thinks of a number.

She divides the number by 12

She subtracts 10 from the result.

Her final answer is **–4**

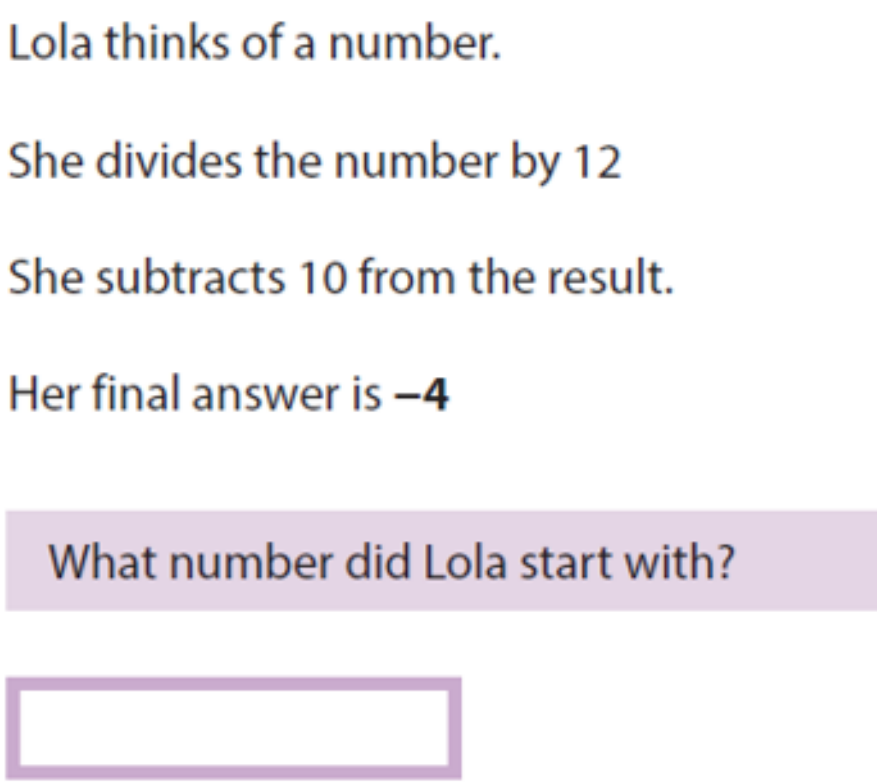
What number did Lola start with?

Diagnostics addressing key misconceptions – mathematics

- Correct answer is 72:
- -4 + 10 = 6

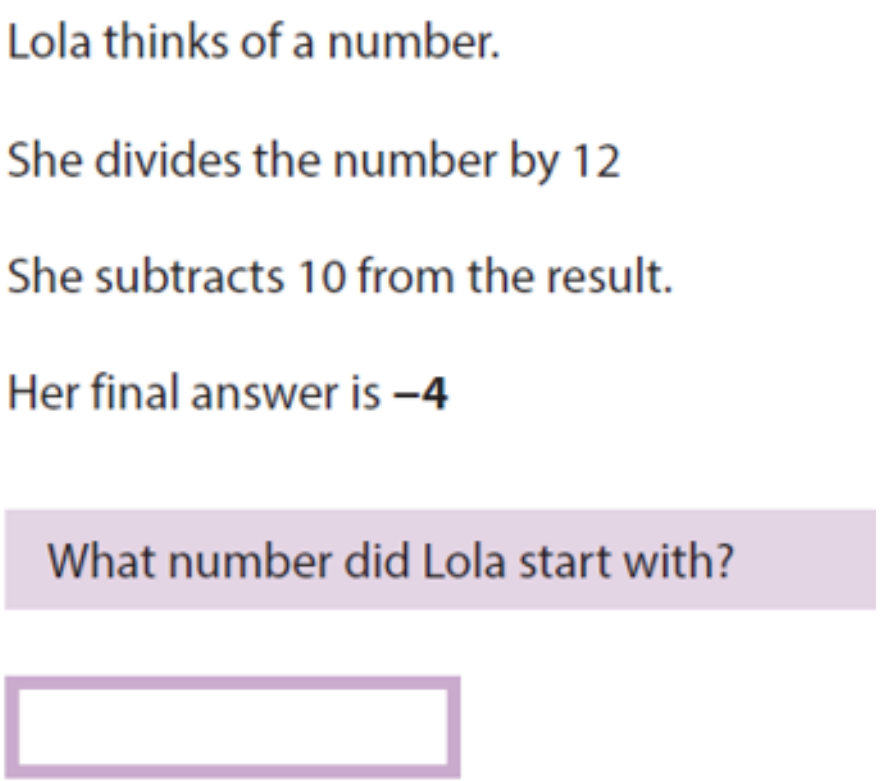
  6 x 12 = 72
- The most common error was *48:*
- -4 + 10 = 4

  4 x 12 = 48



Diagnostics addressing key misconceptions – mathematics

- What does this error tell us about pupils' understanding?
- Their understanding of negative numbers is not secure: when crossing zero and adding 10, pupils are following the rule they see with positive numbers: 4, 14, 24
- Implication: focus on adding and subtracting multiples of 10 with negative numbers crossing zero



Closed (multiple-choice) question

36 *"If something's naturally easy, it's nothing to boast about."* (page 11)

By saying this, Simon was telling Krishna to…

Tick **one**.

be brave.	☐	22%
show off.	☐	8%
be humble.	☐	36%
keep trying.	☐	9%

1 mark

NFER / EEF on-going study

Results of Wave 1 published:

attainment https://educationendowmentfoundation.org.uk/public/files/Publications/Covid-19_Resources/Impact_of_school_closures_KS1_interim_findings_paper_-_Jan_2021.pdf

diagnostics https://educationendowmentfoundation.org.uk/public/files/Publications/Covid-19_Resources/Impact_of_school_closures-_potential_implications_for_practice.pdf

Results of Wave 2 to be published in June (attainment and diagnostics)

Results of Wave 3 to be published in autumn 2021

And what it means in the classroom

https://educationendowmentfoundation.org.uk/public/files/Publications/Covid-19_Resources/Impact_of_school_closures-_potential_implications_for_practice.pdf

Both subjects

- Overall, year 2 children did less well in 2020 than year 2 children did in 2017.
- In general, the curriculum areas that children found challenging in 2020 were those found challenging in 2017.
- Disadvantaged children performed less well than other children on all questions, across both subjects, and were less likely to attempt questions towards the end of the assessments.
- Data suggests that the gender gap, the performance difference between boys and girls, has remained stable since 2017. Boys still do less well than girls in reading but do marginally better than girls in mathematics.

Reading

- Evidence from 2020 suggests that the disruption to schooling has had the greatest effect on children who are still at the early stages of learning to read. This pattern was the same for disadvantaged and non-disadvantaged children.
- Across the test, the biggest difference in performance in 2020 compared to 2017 was on questions based on the first and easiest text.
- Although children tended to work through to the end of assessments, children in 2020 were more likely to miss out questions than in 2017. In 2020, this was particularly true for boys and disadvantaged children.
- Of the curriculum areas assessed, inference remained the hardest and retrieval the easiest. Questions which required children to use the text to understand the meaning of given words, appeared to be the least affected.

Mathematics

- Overall performance on reasoning and arithmetic papers was lower than 2017.
- In 2020, children rarely used written strategies. However where they did opt to use one, strategies to support counting were the most common.
- There is little evidence to suggest that children have lost their resilience – their resolve to complete the papers – since 2017. The rates of children reaching the end of the papers were largely the same; omission was slightly higher in 2020.
- Curriculum areas which children tend to find more challenging saw the biggest drop in performance in 2020. Average performance on questions which assess skills taught in year 1 was often at least as good as in 2017. This may be a result of consolidation in the autumn term of 2020 rather than the introduction of new material.

Subject overviews

Reading

- Children continue to need support with inference, for events and emotions.
- Developing understanding of narrative sequencing may be beneficial.
- Children may need support to understand a character's motivation.
- Comprehension was sometimes affected by reliance on illustrations.
- Children need support to organise and utilise key information.
- Children found it more difficult to provide longer written responses.
- Children may benefit from more experience with a range of non-fiction texts.
- Children may struggle to interpret question words.

Mathematics

- Children's ability to add numbers has improved slightly; however, they struggled with bridging tens.
- Children's ability to subtract numbers has improved slightly; however some aspects may need strengthening.
- Children are finding it more difficult to multiply numbers.
- Children need support to develop their ability to divide numbers.
- Children need support in developing the foundations of understanding fractions.
- Children seem secure in most areas of number recognition, place value and counting in steps, backwards and forwards.
- Children would benefit from a continued focus on money and interpreting analogue clocks.
- Most children are secure with bar charts but may need support to interpret tally charts.

Thank you

l.twist@nfer.ac.uk

https://www.nfer.ac.uk/for-schools/free-resources-advice/assessment-hub

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National Foundation for Educational Research

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The Mere, Upton Park, Slough, Berks SL1 2DQ
T: +44 (0)1753 574123 • **F:** +44 (0)1753 691632 • enquiries@nfer.ac.uk

www.nfer.ac.uk