

## Section 5:

# The future of Power Maths



The Power Maths Efficacy Study has been invaluable in helping to understand how Power Maths is implemented in classrooms, the impact it has on pupils and teachers, as well as the challenges faced in primary mathematics education, particularly given the still emerging impacts of Covid-19. In this section we outline how the research findings have been used to improve Power Maths, as well as upcoming changes which are due to be implemented.

Although teachers were overwhelmingly positive about Power Maths, they suggested a wide range of improvements that they would like to see. The most common of these centred around requests for enhanced support for fluency, greater clarity in some Practice Book questions, and more challenge for a few high-attaining children. These have informed the development of a new edition of Power Maths, launched from September 2022 to April 2023.



## Fluency

In Autumn 2021 several teachers said that the level of problem-solving and reasoning incorporated into Power Maths sometimes proved a barrier, particularly for less able children, and they requested more emphasis on fluency.

“ I do think the fluency element. To be honest it's mainly the books. Sometimes in the books they're even too scaffolded, which is really ambiguous for the children, I think the children just need to be able to practice some concepts.

School 8, Maths Coordinator/Year 6 Teacher

“ I'd love for Power Maths to put in more fluency... it would just save teachers a lot of time.

School 9, Year 6 Teacher

For the new edition, the core lesson materials have been rewritten in response to this. The Practice Books, in particular, include more fluency throughout, whilst ensuring that all children still engage with problem-solving and reasoning content. In addition, new Individual Practice Games allow children to practise fluency outside the classroom.

## Clarity of Practice Book questions

The approach to scaffolding was sometimes seen as a barrier to clarity: for example, the use of structured answers and empty boxes, to guide children through the thinking required, could be counter-productive.

“ *And I think sometimes, within the pupil book, that next to maybe the worded question, they may have started to show how to solve it and they have to fill in the gaps. But sometimes it isn't clear that that's there to support or for them to fill in the gaps, and it's really, sometimes, I think that is more confusing for the children than them just writing it out themselves.* ”

School 9, Year 2 Teacher

“ *They're like, we don't understand why there are all of these boxes but they do understand how to do the maths, so it's a barrier... less scaffolding more space to just do their working out.* ”

School 9, Maths Coordinator/Year 6 Teacher

Teachers also requested squared paper backgrounds to help pupils lay out formal calculations.

“ *I don't think the book particularly lends itself to setting out column addition and doing that properly because there's no squares on the app. So, we've had to do different things, and we've all got workbooks in our class to go alongside the Practice Books.* ”

School 5, Year 4 Teacher

Development of the new edition focused heavily on responding to this feedback, firstly in terms of simplifying language, and secondly in terms of revising question and answer formats to make it easier for children working independently to understand what to do. Generally, it was found that children needed less structured answer formats and more freedom to answer in their own way. Squared paper backgrounds have been added in the Textbooks and Practice Books wherever relevant.

## Pace of progression and level of support

The study included feedback that some topics could move too quickly:

“ *We did Pupil Voice with... children in maths and one of the comments they said were the questions sometimes jump on too quickly... from what I understand, the new materials will address that a bit more.* ”

School 13, Maths Coordinator



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The new edition provided a chance to gather extensive feedback on instances of the progression moving too quickly, or too slowly, and make improvements, building in more support where needed.

### Power Ups

The Power Ups provide a daily lesson starter that builds number fluency throughout the year. Some schools found this valuable, whereas others wanted something more explicitly linked with the day's key learning.

“ *The Power Ups, for example, I know the purpose of them is to review certain objectives from previously in the year, or from the previous year,... But often the Power Ups are so convoluted, or they take a lot of set up, and you're like, actually that's not practical... They need something that they can look at, and go, ah, this is what I did yesterday, or this is what I did last week, and let's just do it.* ”  
School 18, Year 4 Teacher

The new edition provides 'Quick recap' activities as an alternative way of starting the lesson. Teachers can use these if they think fluency may be a barrier to children accessing the lesson. In this case, the Power Ups provide useful additional fluency practice, e.g. for an afternoon maths meeting.

### Assessment

The study recommended extending end-of-unit checks to give a greater breadth of assessment.

“ *They need to put in some half-termly assessment, or even end-of-unit assessment for teachers, to give us some sort of a standardised score. Because whenever people come in, we need to have data, and that is the one thing that in Power Maths, we can't have, numbers.* ”  
School 19, Year 2 Teacher

Progress Tests to accompany the new edition of Power Maths were published in September 2023. These are half-termly summative assessments, which use a 6-step scale to link all scores with age-related expectation, supported by an Online Markbook.



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### Challenge for higher attainers

Some schools reported a need for challenging content to stretch higher attainers.

“ I think I said last time things like the extra challenges. I'd really like three or four for the whole unit, I think some more specific ones per lesson.

School 13, Year 6 Teacher

“ Sometimes it might be nice to have a bank of extension questions. I remember when I used to use Collin's I used to have... like a newspaper format and there were challenge questions per topic, open-ended... But no, it's good. It's very good.

School 19, Maths Coordinator

In developing the new edition materials, attention was given to providing sufficient stretch as well as support. There is also additional guidance on providing extra depth and challenge when teaching with Power Maths.

Future developments are also planned in this area, including the addition of 360 Problem Solving and Reasoning Challenge cards throughout the Power Maths units, as suitable independent tasks for high attainers, and Professional Development around approaches to challenging all learners with Power Maths.

### Front of class resources

The study recommended revisiting the amount of writing on a single slide in front-of-class materials.

“ The writing's often quite small. So, even when you've enlarged it on your screen, I often feel that unless it's actually printed out for children which then is a huge amount of extra paper, they're not always as valuable as they could be.

School 13, Maths Coordinator

This is a consistent feature of the new edition, where the amount of text on Textbook and Practice Book pages has been reduced to help children focus in on the key learning.

Teacher feedback also suggests improvements could be made to the usability of the front-of-class materials in future.

