

Section 4:

Supporting pupils to succeed



Teachers said that Power Maths was engaging for pupils, something confirmed through feedback from pupils themselves. Teachers were also positive about the capacity of Power Maths to support whole class teaching, and to support a wide range of students, although teachers also reflected on the challenges involved in achieving this. In Summer 2022, significant pandemic-related gaps were still evident for some children, though many teachers were positive about children's progress and learning habits. They considered the consistent structure of Power Maths playing a key role in supporting this, as well as supporting children's learning more generally.



Engaging pupils with Mathematics

Pupils' comments suggested they found the format and structure of Power Maths engaging. Children particularly enjoyed the use of pictures. They appreciated the use of characters with speech bubbles and liked the encouragement to engage with a variety of approaches to a single question.

“ I really like how the book just gives you pictures. So, you have the idea in your head of what you're supposed to do and you can do some stuff with it. So, you can help work out the answer yourself from the pictures.
”

School 13, Year 4 Students

“ Student: I read the speech bubbles, what the people say.
Interviewer: I was going to ask you about that. So, why do you use the speech bubbles?
” Student: Because they give us clues and they give us ideas how to work out the answer.

School 5, Year 4 Students

The following teacher elaborated on the strengths of Power Maths to support a range of learners.

“ Absolutely the routine. Every lesson follows the same procedure, we know there's going to be a Power Up, we know we're going to talk, we know we're going to work stuff out together and then we know we're going to do a little bit of independent work. And every lesson is the same and my children thrive on routine. The anxious ones, the ASD ones, the ADHD ones, the EAL children, it's all routine.
”

School 12, Year 4 Teacher

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Other teachers suggested that they supplemented Power Maths to enable all learners to participate in mathematics learning.

Supporting all learners

The new edition of Power Maths incorporates more recap and support to help lower attainers access the learning, and the pace of the progression has been adjusted based on user feedback (see 'The future of Power Maths' in Section 5). There is also new guidance for providing extra support and extra challenge for children while using the materials (see 'Flexible use of Power Maths' in Section 2). Feedback on the Teacher Guide suggests that engaging with the support here, including the 'Strengthen' and 'Deepen' tips throughout each lesson, helps teachers to successfully include all children in the learning.

Whole class teaching

All teachers in the study recognised the benefits of whole class teaching, with Power Maths helping to support this approach.

“ We’ve done it a long time now, the whole-class approach... everyone moving together and everyone doing the same work, all the children are feeling quite confident that they are good at maths, and they’re not feeling like they’re being left behind.
”
School 19, Year 6 Teacher

“ We probably started [whole class teaching] a couple of years ago, but I would say we’re very much still on the journey of making it as impactful as possible.
”
School 18, Year 6 Teacher

The use of the Discover component of Power Maths, at class level, was seen as a key tool for whole class teaching. Whole class teaching was also facilitated through use of the Share and Reflect sections. Share and Reflect were also seen to support the development of pupils' skills around self and peer-assessment, something key to achieving deeper mathematical engagement.

“ We do stop the whole class and everyone does reflect... However far you’ve got within those three pages, we all then do Reflect at the end of the lesson because I feel that journaling and that reflection on your learning is important for everyone.
”
School 13, Maths Coordinator



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“ We have a lot of talk partners and shared work anyway, so often there are times throughout the lesson where they’re talking, sharing, explaining their ideas, which we know is good for the lower attainers and also the greater depth children.
”
School 18, Year 4 Teacher

Almost all children noted the benefits for them of using whole-class discussion to develop and share their mathematical understanding.

“ I think [working together as a class] is good for you... it helps other people understand different tactics of doing the maths question. Because some people might be struggling with their method, but your method could be a breakthrough and they can help you do it.
”
School 5, Year 6 Student



The overall structure of Power Maths was also seen as supportive of whole class teaching.

“ It’s scaffolded as well... So it starts by you all discussing and then they teach together, they’re working with their partners and then it begins to become more independent, you’re easing off that scaffolding.
”
School 12, Year 6 Teacher

“ I think in general [Power Maths] has been very effective in keeping the class together due to the way that you’ve got the guided practice, you’ve got the representations first and then the scaffolding is carefully removed. That repeats again in the Practice Books. So, I think... that really helps.
”
School 13, Maths Coordinator

The confidence and expertise of teachers also played a key role in supporting whole class teaching. In this context the support for teachers built into Power Maths, particularly the Teacher Guide, is key to supporting whole class teaching.

“ There is a lot of self-confidence that is required. And it does need staff to be confident and have good subject knowledge and be quite dynamic when they’re teaching.
”
School 18, Year 6 Teacher

Whole class teaching was recognised to be more challenging where there was a wide spectrum of prior attainment, something that has been exacerbated by the impacts of Covid-19. However, the structure and consistency of Power Maths were seen as helping to overcome these challenges.

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“ [Whole class teaching] has been a challenge, particularly this year. I've felt this year the gaps are wider than ever.
School 18, Year 4 Teacher

“ I think where you've got real extremes it's obviously very challenging.
School 18, Year 6 Teacher



In some schools approaches to whole class teaching had to be adapted, with teachers using additional materials to provide challenge for very able children. Other teachers felt that Power Maths resources already catered for this group, with Power Ups in particular, providing challenge.

“ I think generally there's some good challenge bits there and there's also the deeper activities. But for your real, real ables, that are consistently doing well every lesson, we tend to supplement with additional resources outside of Power Maths.
School 18, Year 6 Teacher

“ The faster learners... No, they're not being constrained, because they can move on if they want... Because Power Maths is so challenging, it's very rare they actually get to the last question on their own.
School 19, Year 2 Teacher

Supporting whole class teaching

Whole class teaching is better supported in the new edition of Power Maths through improvements to the content and progression that make it easier for all children to access the learning (see 'The future of Power Maths' in Section 5), and through additional guidance for accommodating higher and lower attainers within the lesson (see 'Flexible use of Power Maths' in Section 2). Future developments will continue to support teachers in this area (e.g. additional problem solving and reasoning challenge materials, as described in Section 5).

Progression

Some teachers were confident in the progress children were making in their mathematical learning, indicating that they were relatively ready in terms of their learning habits, mathematical understanding, and curriculum coverage, to progress to the next year. Several teachers noted the role that Power Maths played in monitoring and closing learning gaps in order to ensure children were fully prepared, as well as in ensuring consistency of experience between years.

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Other teachers were more cautious in their appraisal of children's learning in the context of Covid-19 disruption, and consequently their readiness to progress. However, all teachers were positive about recent progress.

“ I'd say I'm really happy with my class's progress.
” School 5, Year 4 Teacher

“ Their achievement this year has been amazing. They have really worked their socks off and we're really pleased. We're delighted with the progress they have made... I think it's set them up for Key Stage 3 really well.
” School 9, Year 6 Teacher

“ I think they're very prepared. Because ... we're all teaching Power Maths in a similar way, and the children self-mark as well. So we all use the same sort of strategies... And once they go into Year 3, they'll have the same opportunities with the routines and the strategies.
” School 19, Year 2 Teacher

In Summer 2022, significant pandemic-related gaps were still evident for some children, though many teachers were positive about children's progress and learning habits. They considered the consistent structure of Power Maths playing a key role in supporting this as well as supporting children's learning more generally.

“ Yes, definitely... I would've said Year 4 weren't ready for 5 until we'd done loads of times table practice which we've done now... That was our gap. I think everybody's ready now for the next year. We don't have any gaps... It's so easy to see because we've got the workbooks... you can see exactly where everybody's up to. It's very easy to monitor.
” School 19, Maths Coordinator

“ We have, broadly speaking, been able to cover the entire curriculum this year for the first time in a while, so that's always nice... To be fair I do think it's predominantly Power Maths because the structure is there, all the lessons are there, the progression is there, but also, because it's a scheme for the whole school, the previous year's stuff is there as well.
” School 18, Year 6

Our findings show how Power Maths has supported a wide range of students to overcome pandemic related learning gaps, and progress mathematically.

