



Pearson

Power Maths – it's every teacher's dream!



School name:  Hague Primary School

Region:  Bethnal Green

A Maths Lead's reflections on Pearson's new programme

Mostaque Kamaly (joint Maths Lead at Hague Primary School in Bethnal Green) loves his subject, and has always encouraged his pupils to share his excitement and passion for the subject. However, he was concerned that – as in so many schools across the UK – his school's spiral curriculum meant that topics were covered only briefly before moving on to the next one. He felt that this often led to rather fragile learning in which children failed to see how concepts connect or how their own skills could build and progress). In addition, confidence and motivation were likely to be poorer, too.

Keen to develop deeper, richer and more enjoyable learning, Mostaque and his team began to use the popular, mastery-driven White Rose Maths (WRM) materials which

covered the three key areas of fluency, reasoning and problem solving – just what they were looking for. What's more, Mostaque soon saw an opportunity to build on this strong foundation. He explains, *"The WRM schemes were working well, but some teachers felt pressured by the challenge of teaching for mastery. I knew that to be even more successful with our maths, we needed a clear and consistent structure for lessons across the school. That's when I discovered Power Maths – a comprehensive programme designed to synchronise perfectly with the White Rose Maths schemes."*

This article summarises how **Power Maths** works in the classroom, and records Mostaque's observations, reflections and ideas on the programme and its impact.

A journey through a Power Maths lesson

Each maths lesson is divided into evidence-based sections and set out clearly in the textbooks (with plenty of advice and guidance from the Teacher Guides, too). Lessons are busy and interactive with children working independently, in pairs, in groups and as a class.

The lesson begins with a **Power Up** fluency task to sustain prior learning, consolidate number facts and establish the lesson's confident, can-do tone.

Next, children share, explore and learn from a **Discover** problem, presented with some focused questions to guide their thinking. Mostaque observes.

“ Children have to grapple with this task, and consider how to show their understanding in different ways. Right there in front of you, the children are taking ownership – it's fantastic! ”

After the Discover stage, children discuss their learning in a **Share** activity. During this whole-class, interactive learning phase, children share their thinking and look for the best ways to solve the problem. Mostaque adds, *"The Share section has the added benefit of allowing children to read the maths. All too often they focus on the abstract, numerical form, such as $3 \times 5 = 15$ ", but a written problem makes very different demands on the children. I'm really enjoying the fact that we can teach children to use the right language, read the maths and see it in different forms at the same time."*

The lesson then moves into a **Think Together** section. *"I love this!"* reflects Mostaque. *"It begins with a teacher-guided question followed by a problem for children to solve in collaboration with a partner, and finally an independent question. It develops the concrete problem through the pictorial and abstract stages and there is clear progression within each lesson. The online guide gives fantastic scaffolding here."*



In the **Practice** section, children use the cleverly devised Practice Books to apply and rehearse what they've learned. *"The carefully varied questions help children to understand the essential features of each concept and build their fluency,"* notes Mostaque. *"They push children that bit further... The questions are not what they're expecting and they have to think a bit more! There's always an 'Even Deeper' challenge question that links to other maths areas, too. Not every child will get to this point in every lesson but it's great to have it readily available to further learners' thinking."*

Finally, a **Reflect** section brings each lesson to a conclusion. *"It's not a traditional plenary: it involves everyone looking back on what they feel they've each learned, and it's a great way of helping each child to understand and consolidate their learning,"* observes Mostaque.

Why my pupils love Power Maths...

What maths teacher doesn't long for children to love maths as much as they do? My colleagues and I hugely appreciate the ways in which Power Maths helps us as teachers, but the best thing has to be the way that our children are enjoying maths and showing their confidence. Even though this is only our second term with the programme, here are just a few of its positive impacts on our learners...

- 1. Building on solid ground** The focus on moving from Concrete to Pictorial and then Abstract (CPA) resources to teach concepts is clearly deepening the children's understanding.
- 2. Success is fun!** Children really enjoy the collaboration involved, and they see that it helps them to learn and succeed.
- 3. Feeling included** They enjoy 'getting to know' the **Power Maths** gang! These four friendly characters are an inclusive bunch, and given our multicultural catchment area, it's great for my children to see themselves represented in the books that they're using.
- 4. Every child a mathematician** One of the key aims in maths mastery is for all children to see themselves as mathematicians, and the steady pace and progression of the lessons helps to make that happen. My kids love seeing themselves as mathematicians and collaborating together to become independent learners, and I'm truly happy to know that's how they feel!

See the magic happen...

In little more than a term, Mostaque and his colleagues have used the **Power Maths** programme to make big changes to mindsets, enjoyment and progression at Hague Primary School. They are excited about seeing the change in outcomes a little further down the line, and meanwhile, Mostaque is keen to highlight five of the greatest benefits that **Power Maths** has brought to the school.

It ensures coverage

"The yearly overview on the website is useful for ensuring good coverage of all curriculum objectives, and even shows us the relevant objectives alongside each strand, which is really helpful. I'm always concerned about coverage and this overview helps me check that we're on top of everything."

Steady progression

*"The **Power Maths** progression has a really steady pace, always building through CPA and deepening understanding. You can actually see children's insight, confidence and enjoyment growing day after day!"*

It promotes thinking and talk

*"Children no longer have to simply find the answer to a problem, they are now being asked to explain **how** they found it. They have to justify, to prove – and then explore alternative ways of solving it, too! As a result, children are increasingly comfortable with articulating their thoughts and using mathematical vocabulary to do this."*

Great content and lower workload

*"Planning and preparation normally takes so much time – and as a one-form entry school that can mean even more work. However, **Power Maths** has drastically reduced my workload. Online access means I no longer need to trawl the net for resources: for example, you can show each page of the textbook on the screen, (so there's no need to create separate PowerPoints). You can also access the online manipulatives that you'll need in each lesson. The **Power Maths** textbooks, Practice Books and the online resources give everything you could ever need: it's every teacher's dream – and exactly what I need for my class!"*

Impressive teacher support

"The Teacher Guides are excellent. I especially like the way that each unit begins with a starter page, telling you what the children will learn and checking out that they have the prior knowledge they need with some sample problems. It also introduces any essential vocabulary."

These Guides provide a clear and detailed plan for every lesson and explain why tasks have been chosen. They also offer advice and explanation on key issues like interventions and misconceptions. It's helpful material for every teacher, and especially valuable for

*building the knowledge and confidence of NQTs. Along with the helpful **Power Maths** characters (my children love them!), the level of detail makes the story of the lesson beautifully clear."*

Mostaque's top tips

If you're new to **Power Maths**, or will be using it soon, then make it a priority for all classroom staff to observe and talk to teachers who are already using it. They'll be able to offer some great insights on how to hit the ground running with this exciting programme. Below, we've picked out some of Mostaque's own top tips to help get you started!

- Get a clear understanding of the lesson structure before you start, and plan your approach. Understanding the purpose behind each lesson section, how to deliver it and the key questions you'll need to ask sets you up for top quality lessons.
- Don't be put off by the idea of whole-class maths teaching. While every child is working on the same activities, one might finish just a few questions while another reaches the final challenge in the same time. In other words, the programme does away with 'differentiation by task' and replaces it with 'differentiation by outcome'.
- In the Discover section, let yourself step back and take in just what the children are doing. Watching them explore collaboratively and with manipulatives gives you real insight into both their understanding and their misconceptions. I find it handy to walk around the class, and make sticky notes about the methods they're using, ready for the Share feedback section.
- Take a good look at the **Power Maths** users' website. It's loaded with interactive books, slides, manipulatives and other materials that help you with modelling and cut your preparation time right down!

*Power Maths KS1 and KS2 have been judged by the DfE panel to meet the core criteria for a high quality textbook.

Find out more

Find out more about Power Maths at
www.pearsonprimary.co.uk/powermaths