

Mastering Number in October 2024



'They can see it straight away': the impact of Mastering Number

On Tuesday 8th and Wednesday 9th October, Miss Facey visited all classes across our school to see how they are using the NCETM Mastering Number additional maths sessions and/ or mental maths and manipulatives.

We have used the Mastering Number approach in addition in KS1 for a while. This year we have rolled out in Reception, KS1, Year 3, 4 and 5. Reception use this as their main lesson.

Children have an additional 10-15 minute per session, in addition to the daily maths lesson to focus on number fluency. Number bonds in EYFS and KS1, Times Tables in KS2.



Why Mastering Number?

It's a systematic approach and clear progression through Reception to KS1, and KS2.

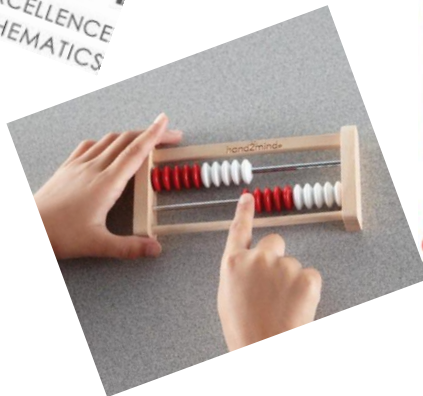
Small steps in learning so all can succeed and keep up. Little and often to plug gaps and improve recall.

It supports pupils to understand the relationships between numbers – to develop their 'number sense'

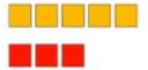
A focus on subitising and how numbers are composed

The use of precise mathematical language, actions and gestures aids understanding and participation.

The careful choice of representations, including the rekenrek, expose the structure of numbers.



Representing number relationships



Nursery- Children were looking at patterns. They had to decide if the blocks were matching or different. Children all joined in with actions and clapping. They then went on to apply the skills they had practiced using the practical equipment. Amazing!





In Reception staff supplemented the Mastering Number PPT and resources well with counting tasks linked to the class text.

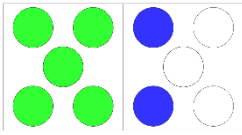
Children were learning about one to one correspondence and using their fingers to make sure that they had counted accurately.

They used rekenreks to support their counting in their independent tasks.

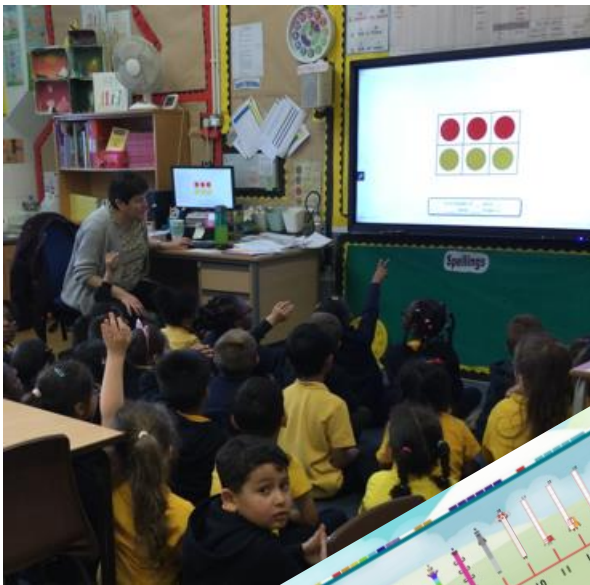
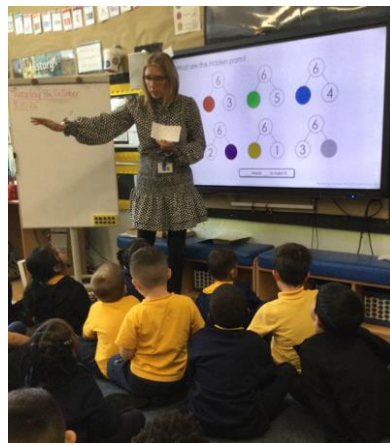
They already have so much beautiful maths work presented in their books! I am super impressed!

In year 1 it was fantastic to see every child using their own individual rekenrek to aid their number sense. The children were learning how to use rekenreks correctly and know how we must use 'one push' to move the beads as a whole number representation. The PPT was used to show clearly the maths and as a visual support, The children used stem sentences well to scaffold their mathematical talk. Well done!

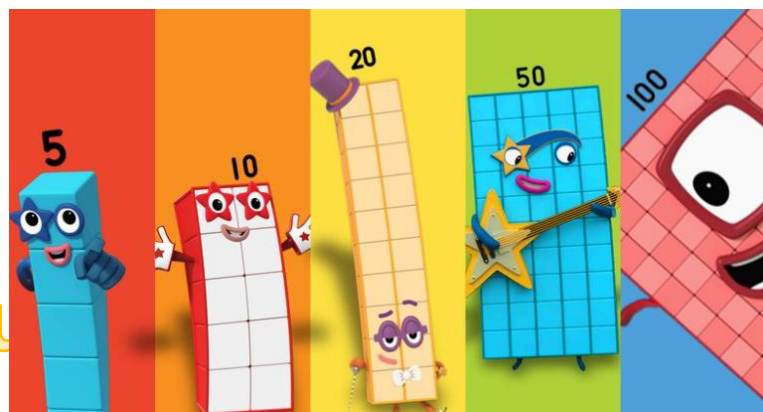




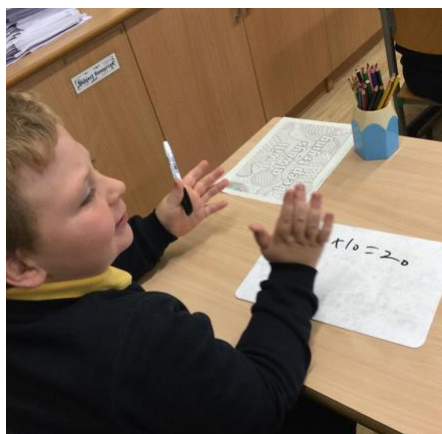
In year 2 there was lots of chanting, repetition of sentence stems and focus on vocabulary. Children were using a Hungarian number frame (similar to dice) and six frames to spot patterns of 6. They then applied their learning of what makes 6 with part/ part whole models. Some children then marked their own work! I was really pleased with everything I saw. Super!



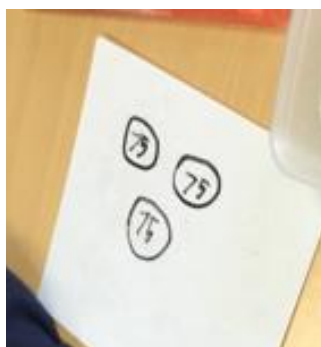
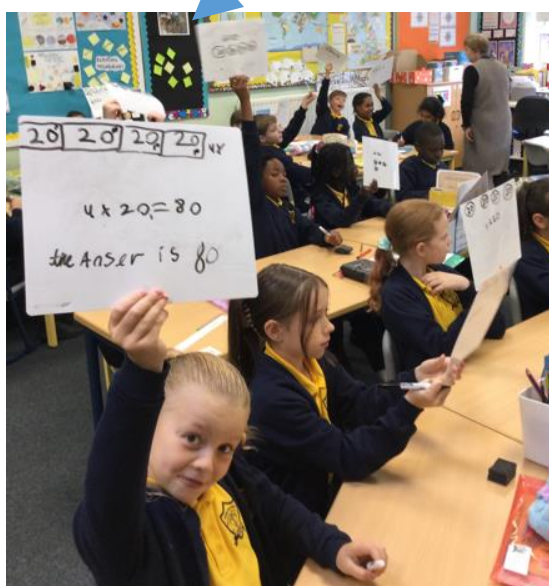
In year 3 the children love the mastering number lessons especially as they feature their favourites- The Numberblocks! Some of the children have been learning about adding and subtracting one more and one less. Some of the children have been learning about number lines, and have been finding the midpoints between multiples of 10. Children can confidently identify the start point, end points and midpoints too. Well done all!



There was a lot of fantastic times table learning happening in year 4! The children were responding in so many different ways including chanting, clapping times table rhythms, showing numbers on their fingers, using their fist as stampers to unitise, talk partners and mini whiteboards. Everyone was so engaged and demonstrated a really solid understanding of factors and products in the 2 times table including doubling single digit and double digit numbers. Wow! Fabulous work.



There was also huge amounts of super times table learning happening in year 5! The children were again responding in so many different ways including chanting, sentence stems, using their fist as stampers to unitise, talk partners and mini whiteboards. Everyone was so engaged and clear progress in the understanding of factors and products and how this is represented as an image and an equation was evident. Brilliant! I am so impressed year 5.



Thank you and well done!

In year 6 children are already busy sharpening their mental maths skills. Children in year 6 do not all complete the mastering number program, instead focusing on the application of all 4 number operations mentally. In the lessons I observed, children were learning about the order of operations and using BODMAS to help solve their equations. Presentation and layout (which is also a mathematical skill) was excellent in all classes. Well done Year 6. Keep working hard. Fab!



B Brackets	$10 \times (4 + 2) = 10 \times 6 = 60$
O Order	$5 + 2^2 = 5 + 4 = 9$
D Division	$10 + 6 \div 2 = 10 + 3 = 13$
M Multiplication	$10 - 4 \times 2 = 10 - 8 = 2$
A Addition	$10 \times 4 + 7 = 40 + 7 = 47$
S Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$

Key Maths Priorities/ CPD training needs identified to continue moving maths forward:

Continue to build on lesson design to ensure all learners are engaged in all parts of the lesson- careful use of chanting, stem sentences, gesture, actions, talk partners, manipulatives and other response/ engagement strategies. Pedagogical strategies- Make everyone think, no opt out.

Continue to build on the visual and practical representations so that children can 'see the maths'. Structure and representation of number is key.

Adaptive Teaching- all adults supporting learning and supplementing the teacher to secure best possible outcomes in all parts of the lesson. Some classes were using assistant teachers to support learners and teach groups, even within the Mastering Number session.

Strengths:

Mastering Number has been implemented successfully and children report was clear to see children enjoying using the materials and taking part in the sessions.

Impact already- children confident in using rekenreks and fluent in the teaching approaches. The recall of facts was clearer.

Children were talking about and demonstrating their understanding of number and times tables in a number of ways.

Focus on vocabulary and sentence stems, and greater focus on the structure and representation of number.

Children and staff becoming more confident in their use of manipulatives,

Thank you and well done!