

The Association of Bramfield, Brampton and Ringsfield Church of England Schools



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Mastering Number KS2

This year we have signed up to the Mastering Number pilot programme (KS2). Our aim is to ensure all pupils are engaging with Maths and improve attainment: KS2 SATs and Year 4 multiplication checks.

The scheme has been designed to build upon the knowledge developed from Mastering Number in KS1. The representations that children encounter (Hungarian number pattern, rekenrek and finger pattern) are all familiar from previous learning. The sessions are designed to give children the opportunity to see the Mathematics so they can grow and develop their confidence. Teachers are expected to have high expectations of all learners to increase the number of children meeting the expected standard or above. Learning is segmented into small steps with retrieval opportunities and examples to demonstrate structure. Questions are used to prompt children to generalise rules for themselves such as, when we have an even factor the product is always even. Teachers' questioning creates opportunities for learners to reason and think deeply throughout the sessions.

Year 4

In the autumn term children enjoyed learning new gestures to develop conceptual understanding. For example creating a number line by sweeping their hands and using their arms to demonstrate square numbers.



Grace and Jessica demonstrating the gesture to represent an array.

We have been moving away from a reliance on step counting and instead teaching the children strategies to either answer multiplication expressions instantly or within a few seconds. In the autumn term the focus was multiplying by 2, 5 and 10 and square numbers.



Grace and Jessica demonstrating the gesture to represent a square number

In the spring term the children are 'Going for Gold'. To achieve gold the children need to learn a set of core multiplication facts. Only two facts are learnt each week and they get repeated lots of times to develop automaticity.

Year 4 children have said,

'The sessions are short but we learn lots'

'Repeating expressions lots of times has helped me to remember them'

'When I get stuck I think of the gesture and then I remember the product'

Year 5

In the autumn term children revisited multiplication to enable the teacher to assess the children's confidence in recalling multiplication times table facts quickly. In year 5 learners are expected to have automatic recall of times table facts so the learning quickly progresses to links between multiplication and division, and exploring division in context. The spring term then focusses on ratio- using a ratio table to explore scalar relationships when multiplying by 10.

The year 5/6 teacher has explained that organising the class for Mastering Number sessions is important. The expectation is that all children meet each session's expectations. To meet this expectation each child has a whiteboard. This ensures all children actively participate and gives adults in the classroom the opportunity to formatively assess throughout each session.

The children have said,

'I find using the ratio table really useful, it helps me to solve problems'

'Mastering Number helps us to learn our times tables'

'It can be challenging but I have found it helpful'

In summary we feel that Mastering Number has had a positive impact. So far we have seen an increase with children's confidence and interactions when using Mastering Number during sessions.