

Developing maths mastery

TEACHING AND LEARNING
AND ASSESSMENT



SHARING LEARNING ACROSS THE LEARNING PARTNERSHIP
PEER PARTNERSHIP VALIDATED SCHOOL STRENGTH

"We have taken a step-by-step approach to our planned developments in mathematics. We have introduced changes gradually so that we can assess how well they are doing."

BARBARA WIGHTWICK, HEADTEACHER,

Intention

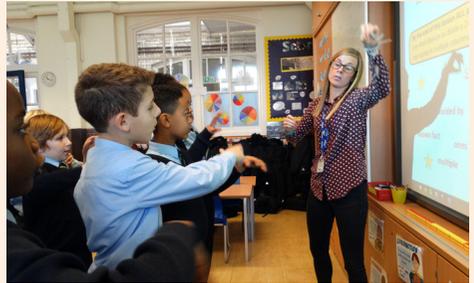
Maths mastery was intentionally chosen and introduced into the school to fit with its wider ethos and approach to curriculum content.

"We wanted a mathematics programme that fits in with the creative curriculum which we are developing", says the headteacher.

"We see maths as a stand alone subject, but one that links too with our enrichment weeks, where activities are about making and doing, rather than solely teaching skills." Maths Mastery has been introduced gradually, so that the expertise in delivering this type of approach to mathematics becomes 'home grown'.

The school has adapted it to meet the needs of their pupils. The headteacher explains, "The beauty of this programme is that you can take it and make it your own - developing challenge in the way that works for you. We have adapted it to meet the needs of our pupils."

This approach to maths mastery in the school is also a development in distributive leadership. The maths coordinator has been supported by senior leaders so that she is not only able to manage the programme



but is also developing her subject knowledge and pedagogical expertise.

Developing the role, expertise and mathematics teaching of the mathematics coordinator has also been another benefit to this programme.

Manipulative, chants and actions for mathematical vocabulary and concepts are now regularly taught.

The maths co-ordinator regularly shares her practice with other teachers in the school. She continues to develop her expertise in all aspects of mathematics because she also regularly attends a teacher research group.

Her role as co-ordinator is not stand alone, but has been developed along with other teachers who are part of her core team. In this way, a number of 'specialist' maths teachers have developed in the school across the age groups delivering this programme.

“It is so important to develop talking between pupils. When pupils talk together they can show their understanding and embed further what they know.”

JESS REAY, MATHS COORDINATOR

Implementation

The maths mastery scheme has now been rolled out each year, and pupils in Year 1 - Year 4 are now successfully taught through this programme.

Jess identifies the key aspects of the programme that have made a positive difference to the development of pupils' mathematical learning. These include:

- chanting numbers etc., from Reception to Year 6
- Vocabulary work at the beginning of every lesson
- a talk task that enables pupils to talk deeply to one another about their mathematical learning. This occurs for 5 - 10 minutes daily and is organised in mixed ability pairings.

The essence of the programme is contained within a six part teaching sequence that lasts for around an hour.

The sequence is broken into distinct units:

- a starter - this includes a 'do it now' task
- the introduction of new learning
- a talk task

- developing and building on the new learning further
- independent tasks and activities; it is at this point that the challenge for 'greater depth' is given
- the plenary.

This academic year, the school has chosen to also focus on and further develop fluency across the school. In particular, they are working on:

- number bonds at Key Stage 1
- times tables at Key Stage 2.

One of the most useful ways in which mathematical concepts are developed is through the use of star words that include linked actions with each word.

“The link between the kinaesthetic action, the concept and the word make sense to our children and so it accelerates their learning.” says Jess.



“The quality of teaching of maths mastery is consistent. Staff are well led and managed by the maths subject leader who has ensured that they have benefited from appropriate training and support.” **HFLP PEER REVIEW REPORT, LESLEY LEAK, 2018/19**

Impact

Jess, the maths co-ordinator, has been supported by senior leaders, to introduce and embed the maths mastery programme in a very clear and consistent way.

In this two-form entry primary school with an attached nursery class, the programme has been adapted so that:

- Teachers are partnered and the more experienced teacher can lead on planning and practice.
- Staff training, INSET and staff meetings are used effectively to create initial and on-going training for teachers in maths mastery.
- There are regular weekly phase meetings where maths issues are raised and discussed.

In Reception, children have a shorter adapted daily maths mastery session that matches what these young

learners need to know. Its teaching focuses particularly on talk partners and star words.

In this way, the teaching programme of maths mastery is developed throughout the year to teachers who are all at varying stages of learning.

It is clear that it is not just the maths mastery programme, but the way in which the programme has been developed systematically across the school that has led to its success and positive impact on pupils' learning.

The school cites the increased results in Key Stage 1 as evidence of the success of their implementation of this programme.



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