Teaching for Mastery Lesson Design at Brinsley Primary & Nursery School

A Primary Case Study

Teaching for Mastery Lesson Design Work Group

One of the biggest challenges facing schools as they adopt a teaching for mastery approach is how to design lessons. Working collaboratively with practitioners from across the East Midlands the project, we began by identifying the key features of mastery, before exploring a route through a lesson, that allowed teachers to link these together in a coherent manner. Essentially we were looking at how to turn theory into outstanding classroom practice. Though our research often went much wider what is captured here in these case studies, each participant school was asked to focus in on one aspect of lesson design, how it has been incorporated into classroom practice, and the impact it has had on learners.

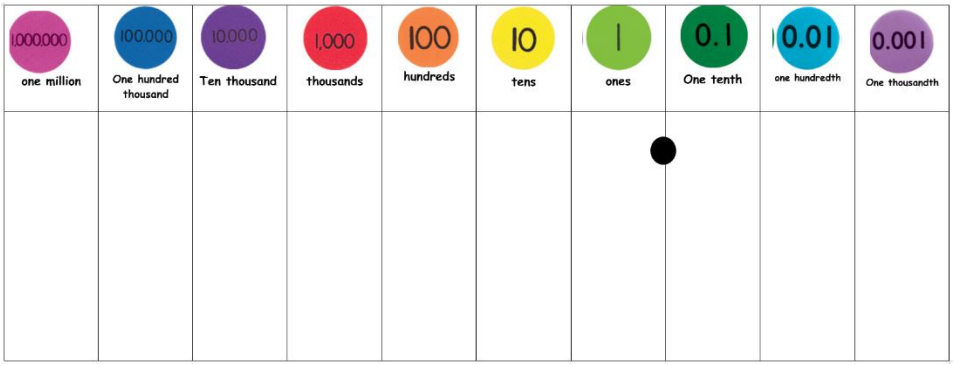
Overview

Natalie Sisson began teaching at Brinsley Primary & Nursery School in September 2017 and took on the role of Maths and IT Coordinator across the school having previously been English Coordinator for several years. Brinsley Primary is within an ex mining community and the vast majority of children are White British. The number of children in the school has grown dramatically in the last 5 years. Subsequently almost all classes now have close to 30 in them. Natalie has been involved in the Mastery Lesson Design Group and have found that the networking opportunities and the time to reflect on her practise invaluable. She has found that there is a good balance between elements which can be applied instantly to her teaching practise and those concepts which will take time to include. Natalie wanted to take part in the project as small steps had been taken to move towards a mastery maths curriculum in the 2016-2017 academic year however the staff were still using a traditional approach of 3 levels of differentiation in maths. In September, Natalie made the first move to a more up to date approach to ensuring that differentiation was still evident but that all children were broadly moving along together, using resources to support the children who were below the expected standard whilst offering Greater Depth children the change to deepen their thinking. Natalie has been able to implement some aspects covered in the workshop through the use of staff meetings.

"I found that staff were nervous about moving to the new approach in maths. The head trusted me to make the decision to stop differentiating in the traditional sense and ensure that all children were having the opportunity to access age related objectives. As a year 6 teacher, I have seen how essentially denying a group of children to opportunity to have access to age related content accumulates into an unmanageable and unsolvable situation when trying to get the children through the SATs tests. Taking part in this workshop has given me the validation that the messages I am giving to staff are correct are valid approached to mastery maths."

What we did at Brinsley Primary & Nursery School

In her lessons, Natalie looked at the structure of her lessons and how she could differentiate effectively without the need for 3 completely separate tasks. She ensured that each maths lesson began with an anchor task and allowed the children a few minutes to discuss what was being asked of them to identify the number story (if applicable). After clarifying the maths behind the task, she would then allow them time to work independently or with a partner (this choice was made by the children). Children working towards the expected standard would have received a pre-teach before the session which, as she didn't have a Teaching Assistant, was a quick look at the concept and a practise. These children would then be given a resource which supports them during the anchor task. For example, finding percentages of amounts, these children would have a place value grid so that they could physically move the numbers along.



Children working at Greater depth would be asked to complete the anchor task but then add a question to deepen their understanding. For example, 'Can you find the most efficient and least efficient way to find 27% of x?' This approach allows children to be challenged without racing ahead of the rest of the class. Children are then allowed to share their ideas with the class using the iPad as a visualiser (iVisualiser or Explain Everything). Natalie also often encourages the children at this point to record their work in Seeaw which gives her information regarding assessment. After discussion and looking through visual representations, Natalie then focuses the children on the stem sentence which will be returned to at various points during the lesson. This sentence is recorded in their books by the children as a point of reference for when they encounter this type of problem again.

"The stem sentence helps me remember what I have got to do. When I look at graphs now, I know I have to work out the intervals before I can find the information accurately." Lille Year 6 student at Brinsley.

During the guided practise task, Natalie uses this as a key Assessment for Learning point, again supporting thise children who need it with practical resources. Offering a further question for Greater Depth children adds another mastery element to the activity. Once she is sure that the children are able to complete the task, she moves children on.

"I don't see the need for children to continue on the guided element if they can clearly demonstrate they have understood the concept. I would rather they use this time to practise applying their skills independently. As I don't have a TA, it means I can stay with a smaller group of children to guide them whilst the others move on. Everyone must complete the first guided task; I then walk around the room and subtly move children on to the independent task."

Natalie has used extension tasks to great success in her year 6 class. By using the White Rose schemes of work, she has been able to create 'Next Step Challenge Tasks' for the children to deepen their understanding of the concept.

"Again, this allows greater depth children to extend their understanding through a deeper question or problem without them flying off miles ahead of the class."

In the plenary, Natalie uses a variety of different resources to pull together a question/problem which really gets the children thinking. This is a time of the lesson which uses the elements leant during the lesson but applies it in a different concept. At this point, Natalie is able to identify children who may benefit from some afternoon intervention with her. Interventions are completed once topic input has been delivered and a small record of this is made in their books.

Summary and next steps

Following her own success in using the mastery lesson design, Natalie was keen to role it out across the school. In the following weeks, Natalie was given two staff meetings in which she explored the 9 elements of a mastery lesson with staff and introduced the mastery lesson plan. Natalie asked F1 & 2, Year 1/2, Year 3/4 and year 5/6 to work together discuss a lesson they were planning the following Monday. I asked them to plan for differentiation within this lesson, following the lesson plan structure to guide them. Staff were asked to record work done in this lesson along with the practical resource they used to support the children who were working towards. They spent an hour planning their mastery lesson and used the time to prepare resources. The following week, staff sat in their key stages and discussed their lessons with a member of SLT to facilitate discussions and create a WWW and EBI grid. Actions were decided and recorded by Natalie. Feedback from staff was very positive:

> *"I really found this weeks and last weeks staff meeting for maths really helpful and I definitely have a better understanding of it now we've been through it all."* Year 4 teacher at Brinsley Primary

Two members of staff in KS2 have since made the decision to use the mastery maths lesson plan as their main planning tool.

Looking forward

As maths is going to become the school priority in the 2018-2019 academic year, there has been a lot of time allocated to staff training to be led by Natalie but also Jane Gill from the Nottingham City Primary Maths Team. The focus for these sessions is likely to be around practical resources and how staff can use these to support working towards children in their understanding of maths concepts. The intention is for KS1 children to have access to a stock pile of essential maths resources which will be in the tables to encourage the independent use of them. This will be replicated in KS2 albeit likely to be less practical and more informational.

More Information

For more information about this project, or other workgroups and opportunities available through the East Midlands West Maths Hub:
Visit our website: http://www.emwest.co.uk
Follow us on Twitter: EM_MathsHub
Email: mathshub@george-spencer.notts.sch.uk