Teaching for Mastery Lesson Design at

Morven Park Primary and Nursery School

A Primary Case Study

Teaching for Mastery Lesson Design Work Grou

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

I am the Maths Lead at Morven Park Primary and Nursery School. We are a large Primary school in Kirkby-in-Ashfield with a 2-form entry and approximately 500 children. We commenced on our Mastery journey approximately 2 year ago, when I was part of a Teaching for Mastery work group led by Tom Isherwood. The lesson design group has enabled me to continue and enhance the developments already started at our school. Such high quality professional development has enabled me to have the knowledge and understanding of the mathematical curriculum from experts, this has given me the confidence to drive mathematics forwards. I feel that as teachers the Mastery journey is one that we should all be on, developing skills and expertise as we travel forwards. The lesson study group has been valuable time spent with colleagues and enabling me to identify quality developments to use in my school. I am sure that any future training will link to current practise already in place.

What we did at Morven Park Primary and Nursery

We began a Mastery approach to Maths in our Foundation this year. We no longer use maths books; we collect evidence of children's mathematical jottings during carpet teach sessions, child initiated work during child initiated play and photos of children exploring mathematical resources and applying learned skills.

Changes this year:

* We allow more time for and encourage our children to communicate their mathematical understandings.
* We focus more on small steps of progression to really support children's mathematical understandings. We work on the same idea over time, rather than moving on too quickly (which we have previously done.)
* We have one focus per maths session and any children who don't achieve the learning objective access a rapid intervention. This helps ALL of our children access their maths journey together.
* Our lesson design starts with 'practice for fluency' and the main session is for 'teacher
* Adults have a 'because' sign to really emphasise the importance of explaining the maths process.

Many aspects of mathematics have changed at our school in the last two years.

In Key Stage 1 and Key Stage 2 - The structure of our lessons in mathematics was certainly a change that everyone was part of and we all felt was necessary. Our lessons all have some aspect of mental and oral or rapid mathematics to begin with; following this is the anchor task, independent task and depth task. Finally, at the end of every session, there is time made for 10 in 10 quick arithmetic. We made the decision to develop extra-staffed reasoning sessions, to enable children to complete reasoning tasks in smaller, more focussed groups. From this initial change we wrote our maths ethos and this was shared within our collaboration of schools.

When planning all staff consider pre and post teach ideas. Pre teach sessions might enable a struggling learner to access the task. A post teach session might enable a learner to gain a clearer grasp of the task or give depth to current understanding. These

modelling' and 'exploration time' for children using the 'my turn your turn' model. We have strong links to the provision so children can explore and develop newly learned skills in their child-initiated play.
* The 'my turn your turn' model allows adults to talk through their thought process to encourage children to do the same.
* All children use resources throughout our maths sessions. We always use carefully chosen examples so the children can see the number patterns. (This is a big change from last year when we used dice generators and magic bag activities for random amounts and numbers.)
* We really encourage mathematical jottings – rather than just number writing. These include drawings, tallies, dots and marks.

sessions generally take place during assembly time or lunchtime. We also now offer a number of mathematics lunch clubs, after school and holiday clubs to our older children. We aim to develop this further next year.
We regularly interview children about mathematics and the outcomes show enthusiasm and excitement about the changes we have made. Children see the purpose of the anchor task and like it when it is linked to real life. Children also comment on the success gained from their skills in arithmetic from the ten in ten sessions. We realise that children need strong skills with number bonds and times tables, as well as being able to manipulate numbers in various ways. We continue to make time for this in daily maths lessons, finding the most elegant way to solve a problem.

<u>Focus</u>
After deciding that we needed to continue our development of reasoning skills. We felt that all children can become good mathematicians but we need to teach them the skills to do this. Giving children the opportunities to reason in the maths session as an anchor task or in an extra reasoning session goes towards developing this. We made the decision to purchase some new resources to enable us to make this learning clear.

Children were recently asked what makes them a better mathematician, their responses were; good teaching, fun lessons, with particular reference to the anchor task. The children said that the anchor task made maths real and fun, it made them think. Purposeful anchor tasks enable children to ask mathematical questions on a daily basis and hopefully encourages them to develop the skills of a good mathematician. We aim to continue development of the anchor task.

Rapid/Mental Maths Warm up	Main Session Anchor Task	Guided Practice	Independent Task	Depth Task	Arithmetic Focus 10 in 10

Summary and next steps

Our next steps will include a collaboration review of lesson features, so that all staff have a clear understanding of the aspects expected and exactly what they look like in their classroom. Staff may benefit from time given to lesson design so they are reminded of the aspects, for this staff may benefit from working with each other as well as working with colleagues in our Collaboration.
We are currently planning a group INSET to include mastery (where are we now?), understanding struggling learners, developing greater depth, bar modelling, organising planning and involving parents.

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