Teaching for Mastery Lesson Design

Staveley Junior School

A Primary Case Study

MathsHUBS East Midlands West

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

We are a small junior school with 154 children on role. Our school is in an area of high deprivation. We are in receipt of pupil premium for 58% of our pupils with 35% being entitled to FSM. We have a unique ethos in our school where we never use the levels of disadvantage as an excuse for low achievement. We have extremely high expectations of our children and over the past 3 years levels of progress have always been above national averages. However, due to their low starting points and lack of general life experiences our children find the application and reasoning of maths very difficult. This is often down to a lack of vocabulary and the ability to visualise how concepts in a real life situation. We feel that by developing our approach to mastery in maths this will support our children with higher levels of reasoning and application skills which will enable them to achieve their potential. This is my second year as maths coordinator and in September I was eager to improve my own subject knowledge of mastery maths. Before the project, we had already introduced some aspects of mastery which included, lots of practical activities using resources, the Signapore bar method to support word problems and cross curricular reasoning/real life problems. We do not currently follow a scheme but are looking to implement one in the near future. Staff have always been fully committed to developing our approach to mastery teaching and we felt that by being part of the lesson design project it would help us on our mastery journey.

What we did at Staveley Junior School

After attending the first lesson design group day, I recognised the need to change the structure of my own lessons and the need to work on developing my own practice to begin with. My maths lessons now begin with a number challenge (designed to help the children with the main part of the lesson). I then go on to the anchor task, before the guided and independent parts of the lesson. Having this structure has impacted massively on my practice and on the progress of my pupils. I feel much more confident in understanding what a mastery lesson looks like and how to approach my planning. In addition this, my children love having a structure and it has helped build the confidence of my struggling learners.

Anchor Task

Having an anchor task at the start of every lesson has really improved my own practice and improved my pupils' understanding of mathematical problems. It is an instant assessment tool and one minute into my lessons I have a detailed understanding of all of the children's starting points. Starting lessons in this way has significantly improved my pupils' ability to articulate their mathematical understanding. By having the opportunity to discuss and listen to ideas the children have managed to acquire a range of new mathematical vocabulary- something they had previously found very difficult. It has also helped them to become much more secure problem solvers. They have developed a bank of strategies that they can now use to solve any problem. Their resilience has grown and they now have a much more can do attitude towards mathematical problems.

Stem Sentences

Another element which has had a huge impact on my own practice and the understanding of my pupils is stem sentences. At the start of my journey I found it difficult to think of relevant stem sentences prior to the lesson. However, I have now learnt that they are often used best when they are generated during key parts of a lesson. As I am teaching, I can now recognise when a stem sentence needs to be used to help my pupils acquire the knowledge they need. The implementation of stem sentences has really helped me to understand what it is the children need to learn/ remember. They have really helped those children, who had previously found retaining information really tricky to remember key facts and rules.

Staff CPD

Throughout the year, I have led a number of staff meetings, where I have shared the changes I have made to my own practice and where we have discussed our vision for our school as we embark upon this mastery journey. Although the staff at my school are wonderful and open to change, I have at times found it difficult to articulate all the great things I have learnt. I think at times it can be over-whelming for staff if you bombard them with lots of ideas at once. As a school, we have overcome this by implementing elements gradually. For instance, we started with just having an anchor task at the start of each lesson. Then we decided to drop in stem sentences and challenge questions. It was then decided that myself and my colleague in year 5 would take the mastery approach to every maths lesson, whereas other teachers would only trial it twice a week. This approach has been received really positively by our teaching staff as they feel they have had more time to fully understand the different elements. Furthermore, it has not had a negative impact upon their workload.

Summary and next steps

Being part of the lesson design study has really enabled me to improve my own practice and to drive my own mastery journey. I have begun to share my new knowledge with the rest of our staff but this is still something we hope to build on. Our next steps for the next academic year are to implement the mastery approach fully across the school and to purchase a suitable scheme for our setting. In order to achieve this aim we feel we will need to take the following steps:

- Carry out staff training with all staff including teaching assistants to ensure we all share the same vision
- Plan units of work in teams so we can ensure the learning journey is coherent and that each lesson has the correct varied representations
- Observe good practice in our own setting and in other schools.

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
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