

Intent - Maths - The Oakmeadow Way	Implementation	Impact
<p>At Oakmeadow CE Primary and Nursery School, we believe that anybody and everybody is a mathematician. Our aim is for all children to develop a positive mind-set and a passion for maths through fostering an environment of risk-taking, mistake making, investigating, reasoning and learning together.</p> <p>‘The answer is only the beginning.’ - Chinese proverb.</p> <p>It’s the process that matters, not the winning answer.</p> <p>At our school, we are developing a concrete, pictorial, abstract approach to develop a secure understanding of mathematical principles and ideas. Throughout school all children will have the opportunity to use manipulatives such as Numicon, Base ten, place value counters, place value boards etc. to support learning. Questions asked by the maths teacher will allow children to think deeper. Manipulatives can be used to facilitate this.</p> <p>Children will often work with a maths partner. The partner is normally pre chosen by the teacher in advance of the lesson. The partnership should allow and encourage opportunities to develop reasoning skills but also learning skills such as speaking, listening, turn</p>	<p>As a Maths Hub primary lead school in Salop, Herefordshire and Wolverhampton, our learning-teaching approach, is small steps and steers towards ‘Teaching for Mastery’ where the focus is on creating as many relationships and links between the skills and concepts – depth as opposed to acceleration. We want our children to understand that it’s the process that matters, not just the winning answer.</p> <p>A key feature of the teaching for mastery approach we are developing in our school is the precise design of lessons through use of CPA, modelling, pupil activities, practise questions and intelligent practice. The arrangement of tasks and exercises aim to draw children’s’ attention to patterns, structure and mathematical relationships, therefore providing ‘intelligent practice’ and the opportunity to deepen conceptual understanding.</p> <p>Lessons are carefully designed, often using small number, to ensure the maths concept is exposed. Our lessons are built on the following principles of a mastery lesson:</p> <ul style="list-style-type: none"> <li>● Coherence – making connections so that steps are easier to take</li> <li>● Variation – procedural and conceptual</li> <li>● Representation and structure – carefully planned prior to the lesson</li> </ul>	<p>Children enjoy maths and believe they ‘can do’ maths. They can use mathematical vocabulary to explain, justify and generalise Children are able to link new knowledge to existing prior knowledge - small steps planning.</p> <p>Children build on what they know and can do – as small steps planning and research into understanding long- term memory and limitations on working memory.</p> <p>Sequence knowledge and skills taught through progressional MTP so that children develop deep and sustainable understanding.</p> <p>Children have opportunity to practice so they are fluency in reduces – reducing the impact on the working memory so they can tackle tasks that require deeper thinking.</p> <p>Daily review and weekly review supports children to develop their long-term memory.</p> <p>Reasoning is at the heart of the lessons – they reason and explain their thinking.</p> <p>Class teachers intervene and provide feedback when a child/ children are having difficulty ‘keep-up,’ rather than ‘catch-up’. This may be within a lesson or at another time in the day. There may also be occasions when children are pre taught a</p>

<p>taking and co-operation. This also provides an opportunity for children to demonstrate their understanding by explaining their learning. We have been part of the NCETM for the past four year, and were involved in the England-China Teacher exchange programme, where we hosted two Chinese teachers for two weeks. This fantastic experience has enabled us to consider and adapt our pedagogy and practice, and further develop mathematics teaching for our children. We are developing a teaching for mastery approach.</p> <p>Staff have high expectations for all children and they believe that all children have the ability to succeed. All children within a year group are taught the same content at the same time but there may be opportunities for challenge for the rapid graspers and lessons are carefully designed to support all learners to access the maths.</p>	<ul style="list-style-type: none"> <li>● Mathematical thinking – chains of reasoning</li> <li>● Fluency – number and table facts.</li> </ul> <p>Lessons are carefully designed to include relevant and efficient mental, written calculations and informal recordings (jottings) to trace our thinking as fundamental tools to help with solving word problems and problem solving investigations. We have a real focus on mathematical thinking and reasoning, using effective representation, models and images to help us. We aim to expose the maths structures through different representations and encourage children to develop their own representations and models of proof so that all children embed the depth in conceptual understanding as well as being confident with the procedural fluency.</p> <p>Fluency in number is taught through a sound conceptual knowledge of place value. We aim to develop children’s ability to have rapid recall of times tables up to 12 (which is needed by the end of year 4) so that related multiplication and division facts is at the heart of our vision to empower pupils to be proficient at number crunching.</p>	<p>concept prior to whole class teaching. Rapid graspers are challenged by having opportunities to deepen their learning through carefully chosen challenges/ problem solving activities.</p> <p>CPD is through a whole-school lesson study approach to support staff with subject knowledge and pedagogical approaches using the research from Rosenshine’s Principles in Action. This lesson study should help support teachers with their lesson design and structure.</p> <p>We believe that sharing practice through collaborative lesson design, observation of lessons and post-lesson discussions helps us to continually develop our pedagogy and practice.</p> <p>Performance data is above national and we believe this is because we focus on developing a love for maths, a clarity in maths and a confidence our children can take to secondary school and further.</p>
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