



MATHEMATICS AT WEAVER PRIMARY SCHOOL

INTENT

At Weaver, we teach a rich, balanced and progressive curriculum using maths to reason, problem solve and develop fluent conceptual understanding in each area. Our curriculum allows children to better make sense of the world around them by making connections between mathematics and everyday life. The carefully sequenced structure of the mathematics curriculum across school shows clear progression in line with age related expectations. Children are given opportunity to explore skills and knowledge in depth and gain a secure understanding of particular subject matter. Key knowledge and skills are also revisited regularly with retrieval flashbacks, allowing repetition to embed learning. A concrete, pictorial, abstract approach provides children with a clear structure in which they can develop their depth of understanding of mathematical concepts. We aim to ensure that mathematics is a high profile subject which children view positively and with a strong growth mindset.

IMPLEMENTATION

At Weaver, the expectation is that the majority of pupils will move through the programmes of study at *broadly* the same pace. Using the NCETM PD materials and progression maps in conjunction with the White Rose planning materials and 'small steps' documents, we have designed a carefully-sequenced maths curriculum at Weaver. Connections across our maths curriculum are essential because they allow ideas to be built on over time by our pupils and their understanding made stronger. Knowing where the sequenced progression is heading and where it has come from boosts our teachers' ability to react more readily in lessons. Mapped out, we can see that areas are revisited and there is ample opportunity to build on what has been learned before. In the intervening months or terms, we use low stakes quizzes and retrieval exercises such as the White Rose daily flashbacks. By the time we revisit concepts, pupils are in a good position to solidify knowledge of certain concepts even further.

In the Early Years, there is a significant emphasis on developing a strong grounding in number as a necessary building block for children to excel in the subject. Our Foundation team provide creative and engaging opportunities for children to ignite their curiosity and enthusiasm for the subject. Activities and experiences are frequent and varied, and allow children to build on and apply understanding of Numbers to 10. Concrete manipulatives are a key focus within sessions in Reception, as is the use of pictorial representations including Tens Frames and Part/Whole Models.

When lesson planning throughout the school, we consider which models, images and manipulatives will best support the teaching of the objectives. We also plan for where we can challenge and stretch our pupils- not just 'using bigger numbers', but how lessons can provide a deeper understanding of concepts. We ensure that our lessons are underpinned by problem solving and the application of the maths to be learned. Resources and equipment are audited regularly so that children have access to high quality materials to support their learning. Our resources allow us to better use models and images to support learning in each area and enable the progression from concrete to pictorial to abstract. Children are familiar with these resources and can access them independently where needed.

Maths lessons include explicit reference to vital mathematical vocabulary and the use of stem sentences to support and encourage all children to communicate their ideas with mathematical precision and clarity. These sentence structures often express key conceptual ideas or generalities and provide a framework to embed conceptual knowledge and build understanding. Investigative tasks are designed to allow pupils to follow lines of enquiry and develop their own ideas, justifying and proving their answers. Children work both collaboratively and independently when solving problems which require them to persevere and develop resilience.

We have a planned program of CPD and work as part of the Cheshire Maths Hub Developing Mastery Programme, ensuring teachers are well supported and have confidence in the skills and knowledge in order to deliver the curriculum effectively. As experienced teachers in our year groups, we have understanding of where common misconceptions are likely to arise and how they can be prevented. We can model clearly and accurately the underlying mathematical structures. By talking to our colleagues in regular staff meetings and transition meetings and using the Insight tracking data to identify gaps, we understand when if necessary to go back in order to move forward.

Teachers carry out formative assessment in each Maths session and feedback is given to children verbally, through self/peer assessment and through marking. Teachers then use this assessment to inform their planning. Children are quickly identified as needing further challenge or additional support, and we ensure that this is provided in a timely manner. Where appropriate and resources allow, pupils not secure in a concept will have same-day interventions and on occasions, pre-learning intervention for the next step. Regular post-unit assessments and termly NTS summative assessments inform our planning and allow teachers to track progress within year groups and across Key Stages.

IMPACT

The implementation of this curriculum ensures that when children leave Weaver Primary School, they are confident and competent mathematicians. Our pupils understand that Maths is a tool for everyday life: a whole network of concepts and relationships which provide a way of viewing and making sense of the world around them. The children are shown how maths is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. By talking to our pupils, we observe that the children view Mathematics as an interesting, exciting and enjoyable subject. They are enthusiastic in lessons and confident enough to ask questions, 'have a go'; choose suitable equipment or strategies; investigate and sometimes make mistakes, which strengthens their understanding on the way to finding a solution. Our maths books evidence work of a high standard of which children clearly take pride. The components of the teaching sequences in books demonstrate good coverage of fluency, reasoning and problem solving. Our feedback and interventions support children to strive to be the best mathematicians they can be, ensuring a high proportion of children are on track to achieve or be above age-related expectations at the end of each Key Stage.