

Millfields CE Primary School - Maths

Intent

At Millfields, we endeavour for all our children to leave us equipped with the knowledge and skills needed to be prepared for the next stage of their lives. In order to achieve this, we feel it is vital for children to have developed the strength of character and confidence needed to make decisions and to have a rich vocabulary which will help them to communicate and articulate their thinking. If our children are to succeed as lifelong learners, they will have no limits to their curiosity, a thirst for knowledge and a desire for new experiences. To support them with this, we aim to offer high-quality teaching and learning to develop the reasoning skills of all pupils and foster positive attitudes to maths. An inclusive and collaborative approach to maths teaching allows adequate time to understand and discuss key concepts, helping us to build children's self-esteem and confidence within the subject. Children within the class all access the same learning content and differentiation is by means of support and depth of learning as opposed to by task. We value the importance of enabling our children to reach their potential and will never put a ceiling on their learning.

We have identified a clear progression of skills across all aspects of the curriculum. This helps us to understand how our children learn, what they already know and what they need next in order to be well prepared for the next stage of their learning journey. In addition to building secure relationships with our children, we value the importance of knowing the skills and expertise of our staff and use this information to work as a team in order to maximise the variety and quality of the learning experiences we provide.

Implementation

At Millfields, we adopt a mastery approach to maths in which children are given plenty of opportunities to develop their thinking using concrete, pictorial and abstract methods. CPA is a highly effective approach to teaching that develops a deep and sustainable understanding of maths in pupils. This is the vehicle that teachers at Millfields use in lessons to

represent structures and expose them. It is not a “one size fits all” process and each step will not always be appropriate to the topic. The ultimate aim of this process will always be that children will internalise the representations and can access the maths on an abstract level.

As a school, we follow the White Rose maths scheme, adapting this as necessary to suit the needs of our learners. This ensures progression in problem solving, reasoning and number skills and ensures a uniform teaching approach; using the same models and representations across school.

EYFS maths is based on the document “*Development Matters.*” In Nursey, a mixture of formal teaching and informal learning opportunities that follow the interest of the children are used. In Reception, teachers follow a combination of the NCETM's Mastering Number programme and White Rose schemes of learning – principally securing their knowledge of number facts within 10 and oral counting/recognising numbers to 20. Children are encouraged to spot patterns and identify differences through variation. EYFS practise is centred on exploration and discovery with songs and repetition to secure foundational knowledge.

In addition to the daily maths lesson, all children (Y1-6) access an extra 15 minute arithmetical fluency session:

KS1: NCETM's Mastering Number (moving onto times table teaching in the summer term of Year 2)

Lower KS2: The focus is on teaching specific arithmetic skills, with a particular focus on multiplication tables.

Upper KS2: The focus is on teaching specific arithmetic skills

The TT Rock stars program is used from Years 2 to 6, to encourage independent learning and practise times table facts. We regularly get involved with national tournaments and recognise achievements during our celebration assembly in order to add excitement and motivation.

End of unit and end of term White Rose Maths assessments are carried out in years 1 to 6, to identify gaps and any intervention needs. As a school, we believe that interventions need to be consistent, effective and should help children to keep up with the day to day maths lessons. Therefore, we put the emphasis on ‘pre-teaching’ as opposed to ‘re-teaching.’ This way, teachers are able to pre-empt difficulties and support children before they fall behind and experience failure (which often results in disengagement and lack of confidence). Pre-teach sessions take place every

day prior to the daily maths lesson. Teachers personally deliver 1 x 5-10 minute session, which will prepare children for the day's main lesson. Children who are making less than expected progress access the Number Stacks intervention. They complete a 1:1 assessment to determine their level of attainment for each unit in turn (initially place value). They then follow the programme, 1:1 or in a small group, with a trained TA until they meet ARE for that unit.

Impact

The children will have a positive attitude to maths, they will enjoy the subject and will become more confident and resilient mathematicians. They will have good arithmetic skills which they will be able to apply fluently to mathematical problems and challenges. Children will collaborate well, they will have the mathematical knowledge and understanding to select effective strategies and will have the vocabulary to reason with their peers. As a result of this, they will demonstrate the ability to work well as a team, as well as individually, to develop the most efficient way to solve a problem or overcome a challenge.

All teachers will be competent and confident in all areas of maths teaching and will be able to provide and receive feedback within peer teams. Teachers will have a clear understanding of maths progression across the school.