

Maths Policy



Mansbridge Primary School

Approved by	Governing Body
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Vision

The aims of Mansbridge Primary school reflect that of the National Curriculum for mathematics, which are to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems.
- can **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

At the heart of our teaching and learning in maths is the belief that all children can achieve. It is important that children develop positive attitudes towards maths and we aim to provide a supportive environment where pupils ask and answer questions, openly share work and learn from mistakes. Our objective is for children to develop a rich and accurate mathematical vocabulary which can be used to express themselves and their ideas with confidence.

Teaching and Learning – Power Maths and White Rose		See separate document for Power Maths progression and calculation policies
Intent	We follow a mastery style curriculum through the implementation of the DfE approved ‘Power Maths’ scheme. To ensure whole school consistency and progression, Power maths is used from Year 1 through to Year 6. This is fully aligned with the White Rose Maths scheme which is used in Early years as well as alongside Power maths in KS1 and KS2 to supplement learning where necessary. Maths is taught in blocks to allow a greater focus and a deeper understanding of each unit enabling children to master each unit of maths before moving to the next. Power maths is an ambitious scheme that sequenced in a way that allows learning to build over the course of the year. We teach Power maths in this order to ensure that the progression is consistent across the school.	
Implementation	Maths is taught 5 times a week in years 1-6 group using Power Maths textbooks, workbooks and online resources. A power maths lesson can broadly be split into 4 parts. Discover New concepts are introduced in context with an initial real-life mathematical problem. This gives opportunity for discussion and reasoning allowing children to relate their learning to real life concepts. Share Children are led through strategies, both new and already learned, to solve these problems. Think together Group and pair talk is then used to allow children to develop their fluency together while discussing strategies. Practice Giving children opportunity to practise what they are learning with questions allowing for fluency and mastery. Challenge questions are incorporated in the workbooks to provide means to achieve a greater depth level of learning and challenge. Additional mastery is provided for all abilities to allow for deeper learning and understanding. When introduced to a key new concept, children in all year groups have the opportunity to build competency in this topic by taking the concrete-pictorial-abstract approach. Concrete – pupils should have the opportunity to use concrete objects and manipulatives to help them understand what it is they are doing. Pictorial – pupils may then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems. Abstract – with the foundations firmly laid, pupils should be able to move to an abstract approach using numbers and key concepts with confidence. This is imbedded within the structure of Power Maths. As well as the Power Maths scheme, other high-quality maths resources are integrated into lessons where teachers deem it necessary. These may include White Rose Maths Schemes of Learning and Assessment Materials, Testbase, NCETM Mastery Assessment materials, NRICH, visual images and concrete resources	
Impact	Lessons are well sequenced with a progression that allows learning to build over the year and through the school. The use of power ups at the beginning of some lessons, as well as fluency allow children time to practise skills already taught, revisiting previous learning helping children to learn more and remember more, A monitoring cycle of pupil conferencing, lesson drop ins and book sampling carried out over each term to ensure quality and consistency in the teaching of maths.	

Times Tables	
Intent	For children to have the ability to recall times tables facts to 12 quickly and with fluency. By the end of Year 4 children should have the ability to recall times tables facts with ease, which is essential for future success in maths. To enable children to answer related maths questions with ease.
Implementation	Children in EYFS and Year 1 are not formally introduced to the concept of multiplication. They begin exploring repeated addition and counting in groups to prepare them for times tables in Year 2. They use a range of manipulatives (equipment) and pictorials (images) to support them with counting in groups of 2, 5 and 10. Year 2-Year 6 pupils are taught times tables from 1x all the way to 12x, with this being staggered according to the national curriculum. Children learn about the relationships between the times tables, as well as partnering related division facts. Times Tables Rockstars is used as an online platform for children to practise their times tables according to their target areas. Weekly times tables tests are carried out in class. Times tables are formally tested in Year 4.
Impact	Children enjoy times tables and are motivated to practise and improve their speed and fluency. Children are prepared for the end of year 4 times tables test.
Assessment	
Intent	Assessment is an essential part of teaching and learning and is a daily feature of Power Maths lessons. The structure of Power Maths lends itself to supporting the process of assessment by providing opportunities for questions, discussion and reflections throughout and at the end of the lesson.
Implementation	Formative assessment is used daily as a teaching tool and is carried out in different ways including- - Careful questioning-enabling adults in the room to assess the children's understanding within a lesson and address misconceptions. - Regular marking. It is recorded at the end of each lesson if the children achieve (A) part achieve (PA) or do not achieve (NA). This is recorded daily in an assessment grid allowing for an 'at a glance' understanding of individual attainment in that lesson as well as an overall view of the unit. This then informs interventions and the next lesson. At the end of each Power Maths unit children complete an end of unit assessment. This is a multiple-choice assessment that allows teachers to see misconceptions the children may have. The end of unit assessment also contains one or two questions that requires the children to use their mathematical skills to answer questions. The outcome of this is used to ensure gaps in learning can be addressed. The end of unit assessments are used alongside Benchmark <i>Testbase</i> assessments which are carried out every term. These assessments aid teachers in tracking progress and attainment.
Impact	Regular and ongoing assessment informs teaching and intervention support and allow all children to succeed. Teachers are able to use formative assessment to assess understanding of each lesson and the overall units. Time is allocated through interventions for any children who have not achieved the objectives to revisit the learning.

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