

Mill Hill Mathematics – Intent, Implementation and Impact Statement

At Mill Hill Primary Academy, we understand and value the importance of Mathematics. We intend for our children to be able to understand the world of Maths, have the ability to reason mathematically and to have a sense of enjoyment and curiosity about the subject. We want our children to become fluent in the fundamentals of Mathematics by being able to recall and apply knowledge through skills developed in Maths lessons. They are able to apply these methods independently and show resilience when tackling problems using vocabulary learnt during Maths lessons. We would like our children to be confident in making rich mathematical connections where they are able to reason mathematically and solve problems; from Early years through to year 6. Children at our academy are supported in order to achieve age-related expectations through ‘enabling and extending questioning’. We intend for all children to leave Mill Hill Primary Academy with a love for Maths and will be prepared with lifelong skills to support the next step in their Mathematical education.

Underpinned by:

Intent	High expectations	Key Vocabulary	Recap and Revise Key Concepts
	<p>We believe in all of our children at Mill Hill Academy and have high expectations for all in every Maths lesson.</p> <p>‘Work Hard, Dream Big and Never Give Up!’</p>	<p>Key mathematical vocabulary is shared at the start of every lesson and is referred to throughout. The teacher will demonstrate the importance of the use of the correct vocabulary and will encourage children to use this throughout the lesson and through explanations/justifications to reasoning and problem solving questions.</p>	<p>Through SODA and Maths lessons, we provide children with the opportunity to recap mathematical concepts taught in previous year groups and those taught in their current year group. In doing this, we hope that children continue to be confident learners who feel like they can approach obstacles with the foundations to support them.</p>
	Teacher Modelling	Teaching Fluency	Teaching Reasoning and Problem Solving
<p>Teachers will demonstrate mathematical thinking and vocabulary throughout the lesson. They will show the children how to tackle problems and the importance of resilience and perseverance in Maths.</p>	<p>We intend for our pupils to become fluent in their understanding of mathematical concepts. They will be able to develop the fundamentals of Maths through varied fluency questions which will deepen the children’s understanding. Through practise, the children should be able to recall knowledge easily.</p>	<p>When children have the fundamentals of a mathematical concept, we aim to develop their knowledge and understanding further by providing the children with different contexts in which they have to apply what they know. They often have to justify and explain their reasoning, using key vocabulary shared throughout the lesson and examples that help demonstrate their understanding.</p>	

Implementation	<p style="text-align: center;">White Rose Schemes of Learning</p> <p>Every class from EYFS to Year 6 follow the White Rose Scheme of Learning. Each class will have an adapted version of the scheme, that meets the needs of their class.</p> <p>Lessons provide children with the opportunity to access varied fluency, reasoning and problem solving questions about each concept taught.</p>	<p style="text-align: center;">SODA and Consolidation of Previous Learning</p> <p>During 'Start of the Day' activities, children complete a range of Mathematical tasks, including: arithmetic, specific times tables, recap of previous learning and activities to close the gaps. These allow our children to practice the skills previously taught with additional support and guidance where needed.</p> <p>Each Maths lesson will start with 'Flashback Four' questions that allow the children to practise a concept from the previous lesson, the previous week and topics from earlier in the year – maybe even last year.</p>	<p style="text-align: center;">Vocabulary</p> <p>At Mill Hill Primary Academy, we have created a vocabulary rich environment. Children from EY through to Year 6 are taught key vocabulary which enables them to develop the confidence to explain mathematically.</p>
	<p style="text-align: center;">Concrete, Pictorial and Abstract (CPA Approach)</p> <p>To support Mathematics, we have a range of concrete resources, including: counters (place value and double sided), Base10, Numicon and many other manipulatives. Once children have grasped the concept using concrete resources, pictorial representations (including pictures and diagrams) are used to develop their understanding further. Abstract Mathematics then allows the children to explore concepts in different contexts using all of the knowledge and understanding developed through the CPA approach.</p>	<p style="text-align: center;">Key Skills Practice</p> <p>From Year 1 through to Year 6, the children will complete fortnightly arithmetic assessments to identify the gaps in learning. These gaps will then be re-visited the following week in order to enhance progress.</p> <p>Children take part in guided reasoning sessions, where they work together with their class teacher to apply previously learnt skills to solve reasoning problems. Our children are given the skills to develop the ability to confidently solve problems through decision-making and reasoning in a range of contexts.</p>	<p style="text-align: center;">Times Tables</p> <p>Each class completes daily times tables practise, focusing on rapid recall and linked division facts.</p> <p>In order to advance individual children's maths skills in school and at home, we utilise Times Tables Rock Stars for multiplication practise, application and consolidation.</p>
	<p style="text-align: center;">Making Mathematicians Days</p> <p>Children throughout the school will take part in Maths sessions, that focus on one key concept, in order to develop their Mathematical understanding and ability to reason and problem solve. During these days, children will work in small groups alongside multiple members of staff, to promote more targeted practice. The director of Maths for the City Learning Trust, Trevor Goddard, facilitates these days and supports with the delivery of these invaluable sessions.</p>	<p style="text-align: center;">Assessment</p> <p>Staff at Mill Hill Primary Academy continuously monitor pupils' progress against the attainment for their age. Formative and summative assessments are used to inform planning to ensure gaps in learning are narrowed and that we are providing excellent provision for every child.</p>	<p style="text-align: center;">Continued Professional Development (CPD)</p> <p>At Mill Hill Primary Academy, we are committed to staff development through CPD. This is done by attending training opportunities and regional networking events:</p> <ul style="list-style-type: none"> • Mathematics consultant support <ul style="list-style-type: none"> • Stoke MEP • White Rose <p>As part of the CLT we work closely with other academies to utilise and share knowledge.</p>

Impact	Outcomes	Monitoring
	<p>We strive for all learners to be at the expected standard at the end of the academic year; with some learners exceeding this and achieving greater depth. For those children who have gaps in their learning, we will support them through lessons and interventions with the aim of narrowing the gap.</p>	<p>Through book shares and lesson observations every half term, we recognise that staff are delivering Maths lessons to the children that inspire, challenge and support all learners. The children have opportunities to access the learning at all levels and are becoming confident in their ability.</p>
	Knowledge and Understanding of Maths	Application of Maths to the World Around Them
	<p>At Mill Hill Primary Academy, the children are continuously developing their knowledge and understanding of Maths throughout the school day. They can talk confidently about their learning and are keen to share their success.</p>	<p>Children are aware of the importance of learning different mathematical concepts and how it links to the world around them.</p>