



'God's love shines through us by the work of our hands'

let your light shine before others, so that they may see your good works and give glory to your Father in heaven.
(Matt. 5:14-16)

We are a church school where education is nourished through the teachings of Jesus Christ, enabling each child to fulfil their potential and which reflects our commitment to academic excellence.

Mathematics

Intent:

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can solve problems by applying their Mathematics

At Norley CE Primary School, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Implementation:

The content and principles underpinning the 2014 Mathematics curriculum and the Maths curriculum at Norley reflect those found in high-performing education systems internationally. These principles and features characterise this approach and convey how our curriculum is implemented:

- Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics.
- The large majority of children progress through the curriculum content at the same pace. Significant time is spent developing deep knowledge of the key ideas that are needed to underpin future learning. This ensures that all can master concepts before moving to the next part of the curriculum sequence, allowing no pupil to be left behind.
- If a pupil fails to grasp a concept or procedure, this is identified quickly and early intervention ensures the pupil is ready to move forward with the whole class in the next lesson.
- The structure and connections within mathematics are emphasised, so that pupils develop deep learning that can be sustained.
- Lesson design identifies the new mathematics that is to be taught, the key points, the difficult points and a carefully sequenced journey through the learning. In a typical lesson pupils sit facing the teacher and the teacher leads back and forth interaction, including questioning, short tasks, explanation, demonstration, and discussion.
- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.
- Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that all children keep up.
- Key facts such as multiplication tables and addition facts within 10 are learnt to automaticity to avoid cognitive overload in the working memory and enable pupils to focus on new concepts.

Lessons are planned to provide plenty of opportunities to build reasoning and problem-solving elements into the curriculum. When introduced to a new concept, children have the opportunity to use concrete objects and manipulatives to help them understand what they are doing. Alongside this, children are encouraged to use pictorial representations. These representations can then be used to help reason and solve problems. Both concrete and pictorial representations support children's understanding of abstract methods.

Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time.

These teaching blocks are broken down into smaller steps, to help children understand concepts better. This approach means that children do not cover too many concepts at once which can lead to cognitive overload. Each lesson phase provides the means for children to achieve greater depth, with children who are quick to grasp new content, being offered rich and sophisticated problems, within the lesson as appropriate.

Impact:

Norley has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Students can underperform in Mathematics because they think they cannot do it or are not naturally good at it. Our Maths programme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset.

Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child.

Long Term Planning

Cycle A/B	Autumn											
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Class 1- Reception Autumn 1	Getting to know you		Match, Sort and Compare		Talk about measures and patterns		It's me 123		Circles and Triangles	1,2,3,4,5		4 Sided Shapes
Class 2 Yr 1	Place Value to 10		Place Value to 20		Addition and subtraction				Shape		Consolidation and assessment	
Yr 2	Place Value				Addition and subtraction				Shape		Consolidation and assessment	
Class 3 Yr 3/4	Place value Year 3: area					Addition and subtraction					Multiplication and division	
Class 4 Yr 5/6	Place value		Four Operations				Fractions				Measures, converting units	
Cycle A/B	Spring											
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Class 1- Reception	Alive in 5!		Mass and Capacity	Growing 6,7,8		Length, Height and Time		Building 9 and 10 Consolidation			Explore 3D Shapes	

Class 2 Yr 1	Place Value to 50	Addition and subtraction	Length and height	Mass	Place Value to 50	Money	Consolidation and assessment					
Yr 2	Addition and subtraction		Length and height	Mass	Temperature	Capacity	Money	Consolidation and assessment				
Class 3 Yr 3/4	Multiplication and Division			Length, Perimeter and area	Fractions			Y3: Measurement: Mass and Capacity Y4: Number: Decimals				
Class 4 Yr 5/6	Y5: Multiplication and division Y6: Number: Ratio and Algebra	Fractions Decimals and Percentages				Perimeter, Area and Volume	Statistics					
Cycle A/B	Summer											
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Class 1- Reception	To 20 and beyond	How Many Now?	Manipulate, Compose and Decompose	Sharing and Grouping	Visualise, build and map	Make Connections	Consolidation					
Class 2 Yr 1	Place Value to 100	Multiplication and division		Statistics	Fractions		Time	Position and Direction				
Yr 2	Multiplication and division			Statistics	Fractions		Time	Position and Direction				
Class 3 Yr 3/4	Year 3: Fractions Year 4: Decimals	Money	Time			Shape	Statistics	Position and Direction				
Class 4 Yr 5/6	Shape		Y5: Position and direction		Y5: Decimals	Y5: Negative numbers	Measurement					
			Y6: Position and direction	Investigations and consolidation								

