



**‘Be the light...’**

*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 1/2	Place Value within 20			Addition and subtraction within 20			Place value within 400				Shape	
Class 3 Yr 3/4	Place value				Addition and subtraction				Multiplication and division			Area
Class 4 Yr 5/6	Place value			Addition and subtract ion	Multiplication and division		Fractions				Multiplication and division	
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 1/2	Addition and subtraction within 100				Multiplication and Division				Length & height		Statistics	Consolidatio n

Class 3 Yr 3/4	Multiplication and Division			Length & Perimeter		Fractions			Mass and Capacity		Fractions	
Class 4 Yr 5/6	Multiplicati on and Division	Fractions		Decimals		Area and Perimeter		Decimals			Fractions, decimals and percentages	
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 Connection s	Consolidatio n
Class 2 Yr 1/2	Money		Fractions			Time			Mass, capacity and temperature		Position and Direction	Consolidatio n
Class 3 Yr 3/4	Time		Decimals			Money		Shape		Position and Directio n	Statistics	
Class 4 Yr 5/6	Ratio	Algebra		Shape		Position and direction		Statistics		Converting units		