Our Lady of Perpetual Succour Catholic Primary School

Maths Policy

We learn to love everyone as Jesus loves us

Aims and Values

Intent

Maths is a journey and long-term goal, achieved through exploration, clarification, practice and application over time. Mathematics is of central importance to our modern society. It is an essential part of everyone's daily life and critical to science, technology, finance, and engineering.

Our 3 levels of maths learning:

- Fluency in the fundamentals of Mathematics
- Ability to reason mathematically
- Applying Mathematics to solve real-world problems.

At Our Lady's, this learning is embedded within maths lessons and developed consistently over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of maths, and develop confidence, fluency and accuracy to solve problems and reason logically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Implementation

How is Maths taught?

EYFS

In Early Years maths is taught through varied activities following the White Rose Maths EYFS scheme of work and the Mastering Number scheme. These focus on the deep understanding of basic number through skills such as counting, subitising and simple addition and subtraction. All children are given ample opportunity to develop their understanding of mathematics. Lessons in the Early Years aim to do this through varied activities that allow children to use, enjoy, explore, practise and talk confidently about mathematics and early number.

KS1 and KS2

We follow the Maths No Problem textbook and workbook for mastery maths teaching. These programmes of study are carefully sequenced, in order to develop a coherent and comprehensive conceptual pathway through the mathematics. Learning is broken down into small, connected steps, building from what pupils already know. This mastery approach uses concrete, pictorial, abstract (CPA) approach, the principle of which is for children to have a true understanding of a mathematical concept, they need to master all three phases within a year group's scheme of work. KS1 and Years 4 and 5 supplement the Maths No Problem scheme with Mastering Number to improve fluency and deepen understanding of number bonds, and patterns in multiplication respectively.

When is Maths taught?

In Key Stage 1 and 2, Maths No Problem lessons are held on a daily basis and last for approximately one hour. Children are taught in mixed ability classes. When children start in Reception, the organisation is more flexible building up to a daily 45 minute lesson in the summer term.

In addition to Maths No Problem, Key Stage 1 and Years 4 and 5 and use Mastering Number lessons each day for 15minutes to improve understanding of number.

How we monitor, evaluate and assess teaching and learning in maths?

Subject leaders are continuously monitoring their subject to ensure that it meets the needs of our pupils. Senior Leaders also monitor each curriculum subject. This is done through:

- Learning walks
- Book scrutiny
- Lesson observations
- Pupil surveys and discussions
- Staff surveys and discussions.

Maths is assessed by the class teacher through questioning, marking, T.A feedback and pupil self-assessment. During lessons, children's work is observed and monitored to ensure understanding and to correct misconceptions.

Baseline tests are carried out in September, with further assessments in February and June allowing teachers to measure progress and attainment. These tests are Maths No Problem standardised tests. End of Key Stage assessments are held in May for Key Stage 1 and 2 and pupils' attainment is measured against individual, school and national targets.

Monitoring and Review

The monitoring of the standards of children's work and the quality of learning and teaching mathematics is the responsibility of the S.L.T and the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school**.**

Feedback

Maths feedback is given in many ways and should, where possible, be given within the lesson, preferably at the point of error. Immediate oral feedback through discussion demonstration and questioning is the most vital and effective feedback possible and therefore should make up the bulk of any maths feedback.

Next steps marking may not always be necessary as the next lesson in the Maths No Problem sequence is normally the next step in learning. However, it is essential that all marking picks up and addresses any misconceptions/mistakes and thorough questioning ensures children have clarified their thinking clearly in their journals before the next lesson. Short-term assessments are an informal part of every lesson. Each day, children will be awarded either a 1 (working below ARE), 2 (working at ARE) or 3 (working above ARE), depending on their chosen method and level of understanding demonstrated throughout the lesson.

What do we learn about in Maths?

Maths is split into the main fundamental categories. More details can be found in the scheme of works Appendix A.

Number and Place Value
Calculations
Shapes/Geometry
Measurement
Ratio & Proportion
Algebra
Statistics
Fractions. Decimals & Percentages

APPENDIX A - Maths Scheme of Work

Mastering Number

Reception Overview

Term 1	Term 2	Term 3
Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. **Pupils will:** • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. **Pupils will:** • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. **Pupils will:** • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2

• connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	• understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games • join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	• begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek

Reception – White Rose Maths Overview

Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Autumn	Getting to Know You			Just Like Me!			It's Me 1 2 3!			Light and Dark			Consolidation	
Spring	Alive in 5!			Growing 6, 7, 8			Building 9 and 10			Consolidation				
Summer	To 20 and Beyond			First Then Now			Find My Pattern			On The Move				

Primary Maths Series — Year 1 at a glance

	Autumn Term	Spring Term	Summer Term
Week 1	**Number and Place Value: Numbers to 10** Lesson breakdown	**Calculations: Addition and Subtraction within 20** Lesson breakdown	**Calculations: Multiplication** Lesson breakdown
Week 2		**Geometry – Properties of Shape: Shapes and Patterns** Lesson breakdown	**Calculations: Division** Lesson breakdown
Week 3	**Calculations: Addition and Subtraction** Lesson breakdown		**Fractions: Fractions** Lesson breakdown
Week 4		**Measurement: Length and Height** Lesson breakdown	**Number and Place Value: Numbers to 100** Lesson breakdown
Week 5		**Revision and Mid-Year (A) Tests**	
Week 6		**Review and Remediation**	**Measurement: Time** Lesson breakdown
Week 7			**Measurement: Money** Lesson breakdown
Week 8	**Geometry – Position and Direction: Positions** Lesson breakdown	**Number and Place Value: Numbers to 40** Lesson breakdown	**Measurement: Volume and Capacity** Lesson breakdown
Week 9			**Measurement: Mass** Lesson breakdown
Week 10	**Number and Place Value: Numbers to 20** Lesson breakdown	**Calculations: Addition and Subtraction** Lesson breakdown	**Geometry – Position and Direction: Space** Lesson breakdown
Week 11			**Revision and End-of-Year (B) Tests**
Week 12	**Calculations: Addition and Subtraction within 20** Lesson breakdown	**Calculations: Multiplication** Lesson breakdown	**Review and Remediation**

Primary Maths Series — Year 2 at a glance

	Autumn Term	Spring Term	Summer Term
Week 1	**Number and Place Value: Numbers to 10** Lesson breakdown	**Measurement: Mass and Temperature** Lesson breakdown	**Fractions: Fractions** Lesson breakdown
Week 2			
Week 3	**Calculations: Addition and Subtraction** Lesson breakdown	**Statistics: Pictograms** Lesson breakdown	**Assessment**
Week 4		**Mid-Year (A) Tests and Remediation**	
Week 5		**Calculations: More Word Problems** Lesson Breakdown	**Measurement: Time and Volume** Lesson breakdown
Week 6	**Calculations: Multiplication of 2, 5 and 10** Lesson breakdown	**Measurement: Money** Lesson Breakdown	
Week 7			
Week 8	**Calculations: Multiplication and Division of 2, 5 and 10** Lesson breakdown	**Geometry – Properties of Shapes: 2D Shapes** Lesson breakdown	
Week 9			**Revision and End-of-Year (B) Tests**
Week 10	**Measurement: Length** Lesson breakdown	**Geometry – Properties of Shapes: 3D Shapes** Lesson breakdown	**Review and Revisit Topics**
Week 11			
Week 12	**Measurement: Mass** Lesson breakdown	**Fractions: Fractions** Lesson breakdown	

Primary Maths Series — Year 3 at a glance

	Autumn Term	Spring Term	Summer Term
Week 1	**Number and Place Value: Numbers to 1000** Lesson breakdown	**Measurement: Length** Lesson breakdown	**Statistics: Pictographs and Bar Graphs** Lesson breakdown
Week 2			
Week 3	**Calculations: Addition and Subtraction** Lesson breakdown	**Measurement: Mass** Lesson breakdown	**Fractions, Decimals and Percentages: Fractions** Lesson breakdown
Week 4		**Measurement: Volume** Lesson breakdown	
Week 5			
Week 6		**Mid-Year (A) Tests and Remediation**	**Geometry – Properties of Shapes: Angles** Lesson breakdown
Week 7		**Measurement: Money** Lesson breakdown	
Week 8	**Calculations: Multiplication and Division** Lesson breakdown		**Geometry – Properties of Shapes: Lines and Shapes** Lesson breakdown
Week 9			
Week 10		**Measurement: Time** Lesson breakdown	**Measurement: Perimeter of Figures** Lesson breakdown
Week 11	**Calculations: Further Multiplication and Division** Lesson breakdown		
Week 12			**End-of-Year (B) Tests and Remediation**

Primary Maths Series — Year 4 at a glance

	Autumn Term	Spring Term	Summer Term
Week 1	Number and Place Value: Numbers to 10 000 Lesson breakdown	Calculations: Further Multiplication and Division Lesson breakdown	Measurement: Money Lesson breakdown
Week 2			Measurement: Length, Mass and Volume Lesson breakdown
Week 3			
Week 4		Statistics: Graphs Lesson breakdown	Measurement: Area and Perimeter of Figures Lesson breakdown
Week 5	Calculations: Addition and Subtraction within 10 000 Lesson breakdown	Fractions, Decimals and Percentages: Fractions Lesson breakdown	
Week 6			Geometry – Properties of Shapes: Geometry Lesson breakdown
Week 7			
Week 8	Calculations: Multiplication and Division Lesson breakdown	Measurement: Time Lesson breakdown	
Week 9		Mid-year (A) Tests and Remediation	Geometry – Position and Direction: Position and Movement Lesson breakdown
Week 10		Fractions, Decimals and Percentages: Fractions Lesson breakdown	Number and Place Value: Roman Numerals Lesson breakdown
Week 11			Review and Revision
Week 12	Calculations: Further Multiplication and Division Lesson breakdown	Money	End-of-year (B) Tests and Remediation

Primary Maths Series – Year 5 at a glance

	Autumn Term	Spring Term	Summer Term
Week 1	**Number and Place Value: Numbers to 1 000 000** Lesson breakdown	**Fractions, Decimals and Percentages: Fractions** Lesson breakdown	**Geometry – Position and Direction: Position and Movement** Lesson breakdown
Week 2			**Measurement: Measurements** Lesson breakdown
Week 3			
Week 4	**Calculations: Addition and Subtraction** Lesson breakdown		**Measurement: Area and Perimeter** Lesson breakdown
Week 5		**Mid-year (A) Tests and Remediation**	
Week 6	**Calculations: Multiplication and Division** Lesson breakdown	**Fractions, Decimals and Percentages: Decimals** Lesson breakdown	**Measurement: Volume** Lesson breakdown
Week 7			
Week 8			**Number and Place Value: Roman Numerals** Lesson breakdown
Week 9		**Fractions, Decimals and Percentages: Percentage** Lesson breakdown	**Review and Revision**
Week 10	**Calculations: Word Problems** Lesson breakdown		
Week 11	**Statistics: Graphs** Lesson breakdown	**Geometry – Properties of Shapes: Geometry** Lesson breakdown	**End-of-Year (B) Tests and Remediation**
Week 12			**Revision Topics**

Primary Maths Series — Year 6 at a glance

	Autumn Term	Spring Term	Summer Term
Week 1	**Number and Place Value: Numbers to 10 Million** Lesson breakdown	**Measurement: Measurements** Lesson breakdown	**Geometry – Position and Direction: Position and Movement** Lesson breakdown
Week 2			
Week 3		**Word Problems** Lesson breakdown	**Statistics: Graphs and Averages** Lesson breakdown
Week 4	**Calculations: Four Operations on Whole Numbers** Lesson breakdown	**Mid-year (A) Tests and Remediation**	**SATs**
Week 5		**Fractions, Decimals and Percentages: Percentage** Lesson breakdown	**Number and Place Value: Negative Numbers** Lesson breakdown
Week 6			**Measurement: Volume** Lesson breakdown
Week 7		**Ratio and Proportion: Ratio** Lesson breakdown	
Week 8	**Fractions, Decimals and Percentages: Fractions** Lesson breakdown		**Geometry – Properties and Shapes: Geometry** Lesson breakdown
Week 9		**Algebra: Algebra** Lesson breakdown	**Geometry – Position and Direction: Position and Movement** Lesson breakdown
Week 10			
Week 11	**Fractions, Decimals and Percentages: Decimals** Lesson breakdown	**Measurement: Area and Perimeter** Lesson breakdown	**Revision and End-of-Year (B) Tests**
Week 12		**Geometry – Properties of Shapes: Geometry** Lesson breakdown	**Revisit Topics**