



St Mary's Catholic Primary School
Educate, Protect, Love, Serve
#making a difference together

Our Vision Statement

With the love of Jesus and the inspiration of Mary at our heart, we will be the best we can be.
At St. Mary's we provide every member of our school family with the opportunity to achieve academically and thrive spiritually and socially.

Mathematics Curriculum Overview 2023-24

Intent

Maths is a skill we use on a daily basis and is an essential part of everyday life. Therefore, mathematics forms an important part of our broad and balanced curriculum where we endeavour to ensure that children develop an enjoyment and enthusiasm for maths that will stay with them throughout their lives and empower them in future life. We believe that unlocking mathematical fluency is an essential life skill for all learners and is a pre-requisite to being able to reason and solve problems mathematically. Our aim is to develop a positive culture of deep understanding, confidence and competence in maths that produces strong, secure learning. As a school, we recognise that the key to unlocking the potential in our children is through the development of basic mathematical skills and the understanding of mathematical concepts. We therefore place great emphasis on the use of concrete resources and pictorial representations at all ages, to enable children to fully understand the concepts and principals, when presented with abstract calculations and questions.

In short, our three main aims in the teaching of mathematics are that all pupils:

- Become fluent in the fundamentals of mathematics
- Can reason mathematically
- Can solve increasingly complex problems

Our intention is:

To ensure all of our pupils become numerate.

To instil confidence in them to apply their mathematical skills to solve problems.

To enable our pupils to use the correct mathematical language when reasoning about the subject.

To develop a positive attitude towards mathematics and be aware of its importance as a life skill.

Implementation

Mathematics at St Mary's school is taught through the 'Power Maths' mastery mathematics programme. This programme is being developed across the Plymouth CAST schools. It is a mastery programme of study.

The school and the teachers follow the programme of study which is a spiral curriculum reviewing and revisiting key concepts and components of knowledge over time. Alongside the thorough programme of study pupils also have an opportunity to recall arithmetic facts through a '5 in 5 fluency' check. These are adapted by teachers and consist of low stake tasks that are revisited over and over again and applied through a variety of ways.

The children answer 5 questions in 5 minutes in order to build pace, fluency in maths and recall skills.

Although Power Maths provides a great basis for learning mathematics we are also conscious of the need to have further challenge for pupils who are already mathematical proficient. Further challenge is provided through access to NCETM and NRICH. These challenges provide pupils with the opportunity to deepen their learning even further once they have a good understanding of concept or component of knowledge.

What is mastery?

5 big principles to teaching mastery

Coherence

Lessons are broken down into small connected steps that gradually unfold the concept, providing access for all children and leading to a generalisation of the concept and the ability to apply the concept to a range of contexts.

Representation and Structure

Representations used in lessons expose the mathematical structure being taught, the aim being that students can do the maths without recourse to the representation

Mathematical Thinking

If taught ideas are to be understood deeply, they must not merely be passively received but must be worked on by the student: thought about, reasoned with and discussed with others

Fluency

Quick and efficient recall of facts and procedures and the flexibility to move between different contexts and representations of mathematics

Variation

Variation is twofold. It is firstly about how the teacher represents the concept being taught, often in more than one way, to draw attention to critical aspects, and to develop deep and holistic understanding. It is also about the sequencing of the episodes, activities and exercises used within a lesson and follow up practice, paying attention to what is kept the same and what changes, to connect the mathematics and draw attention to mathematical relationships and structure.

When teaching mastery, it is important to remember that fluency and variation, representation, mathematical thinking, coherence with small steps which enable children to develop as mathematicians.

Please refer to these if asked about your teaching and learning in mathematics.

Power Maths Reception, yearly overview

Autumn term

Strand	Unit		Week	Week title	Early Learning Goal
Number – number and place value	Unit 1	Numbers to 5	1	Counting to 1, 2 and 3	Have a deep understanding of number to 10, including the composition of each number.
			2	Counting to 4	Subitise (recognise quantities without counting) up to 5.
			3	Counting to 5	Recognise the pattern of the counting system.
Number – number and place value	Unit 2	Comparing groups within 5	4	Comparing quantities of identical objects	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
			5	Comparing quantities of non-identical objects	Subitise (recognise quantities without counting) up to 5.
Geometry – properties of shape	Unit 3	Shape	6	3D shapes	There is no specific ELG related to this unit. This unit supports the Development Matters statement: Select, rotate and manipulate shapes in order to develop spatial reasoning.
			7	2D shapes	
Number – addition and subtraction	Unit 4	Change within 5	8	One more	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
			9	One less	
Number – addition and subtraction	Unit 5	Number bonds within 5	10	Introducing the part-whole model	Have a deep understanding of number to 10, including the composition of each number. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 and some number bonds to 10, including double facts.
Geometry – properties of shape	Unit 6	Space	11	Spatial awareness	There is no specific ELG related to this unit. This unit supports the Development Matters statement: Select, rotate and manipulate shapes in order to develop spatial reasoning skills.

Spring term

Strand	Unit		Week	Week title	Early Learning Goal
Number – number and place value	Unit 7	Numbers to 10	1	Counting to 6, 7 and 8	Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Verbally count, (recognising the pattern of the counting system).
			2	Counting to 9 and 10	
Number – number and place value	Unit 8	Comparing numbers within 10	3	Comparing groups up to 10	Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Compare quantities up to 10 in different contexts, (recognising when one quantity is greater than, less than or the same as the other quantity).
Number – addition and subtraction	Unit 9	Addition to 10	4	Combining 2 groups to find the whole	Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.

Strand	Unit		Week	Week title	Early Learning Goal
Number – number and place value	Unit 10	Measure	5	Length, height and distance	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
			6	Weight	
Number – addition and subtraction	Unit 11	Number bonds to 10	7	Using a ten frame	Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
			8	The part-whole model to 10	
Number – addition and subtraction	Unit 12	Subtraction	9	Subtraction	Have a deep understanding of number to 10, including the composition of each number.
Geometry – properties of shape	Unit 13	Exploring patterns	10	Making simple patterns	There is no specific ELG related to this unit. This unit supports the Development Matters statement Continue, copy and create repeating patterns.
			11	Exploring more complex patterns	

Summer term

Strand	Unit		Week	Week title	Early Learning Goal
Number – addition and subtraction	Unit 14	Counting on and counting back	1	Adding by counting on	Have a deep understanding of number to 10, including the composition of each number.
			2	Taking away by counting back	
Number – number and place value	Unit 15	Numbers to 20	3	Counting to and from 20	Verbally count beyond 20, recognising the pattern of the counting system.
Number – multiplication and division	Unit 16	Numerical patterns	4	Doubling	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.
			5	Halving and sharing	
			6	Odds and evens	
Geometry – properties of shape	Unit 17	Shape	7	Composing and decomposing shapes	<i>There is no specific ELG related to this unit. This unit supports the Development Matters statement Select, rotate and manipulate shapes in order to develop spatial reasoning.</i>
Number – number and place value	Unit 18	Measure	8	Volume and capacity	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
Number – addition and subtraction	Unit 19 (Optional)	Sorting	9	Sorting into 2 groups	<i>This unit is optional because sorting is not covered in the EYFS Framework or Development Matters guidance for Reception. It does provide an introduction to the concept of sorting, which will be useful in Year 1.</i>
Measurement	Unit 20 (Optional)	Time	10	My day	<i>This unit is optional because time is not covered in the EYFS Framework or Development Matters guidance for Reception. It does provide a useful introduction to time, which will be covered in Year 1.</i>

Power Maths Year 1, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Book A (Term 1)	Number – number and place value	1	Numbers to 10	14
	Number – addition and subtraction	2	Part-whole within 10	7
	Number – addition and subtraction	3	Addition within 10	4
	Number – addition and subtraction	4	Subtraction within 10	8
	Geometry – properties of shape	5	2D and 3D shapes	5
Textbook B / Practice Book B (Term 2)	Number – number and place value	6	Numbers to 20	12
	Number – addition and subtraction	7	Addition and subtraction within 20	11
	Number – number and place value	8	Numbers to 50	7
	Measurement	9	Introducing length and height	4
	Measurement	10	Introducing weight and volume	7
Textbook C / Practice Book C (Term 3)	Number – multiplication and division	11	Multiplication and division	9
	Number – fractions	12	Halves and quarters	4
	Geometry – position and direction	13	Position and direction	5
	Number – number and place value	14	Numbers to 100	6
	Measurement	15	Money	3
	Measurement	16	Time	5

Power Maths Year 2, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Book A (Term 1)	Number – number and place value	1	Numbers to 100	17
	Number – addition and subtraction	2	Addition and subtraction (1)	13
	Number – addition and subtraction	3	Addition and subtraction (2)	12
	Geometry – properties of shape	4	Properties of shapes	12
Textbook B / Practice Book B (Term 2)	Measurement	5	Money	10
	Number – multiplication and division	6	Multiplication and division (1)	8
	Number – multiplication and division	7	Multiplication and division (2)	10
	Measurement	8	Length and height	5
	Measurement	9	Mass, capacity and temperature	8
	Statistics	10	Statistics	7
Textbook C / Practice Book C (Term 3)	Number – fractions	11	Fractions	15
	Geometry – position and direction	12	Position and direction	5
	Measurement	13	Time	8
	Number – addition and subtraction	14	Problem solving and efficient methods	12

Power Maths Year 3, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value within 1,000	13
	Number – addition and subtraction	2	Addition and subtraction (1)	10
	Number – addition and subtraction	3	Addition and subtraction (2)	13
	Number – multiplication and division	4	Multiplication and division (1)	5
	Number – multiplication and division	5	Multiplication and division (2)	13
Textbook B / Practice Workbook B (Term 2)	Number – multiplication and division	6	Multiplication and division (3)	13
	Measurement	7	Length and perimeter	11
	Number – fractions	8	Fractions (1)	10
	Measurement	9	Mass	7
	Measurement	10	Capacity	6
Textbook C / Practice Workbook C (Term 3)	Number – fractions	11	Fractions (2)	8
	Measurement	12	Moneys	5
	Measurement	13	Time	12
	Geometry – properties of shapes	14	Angles and properties of shapes	9
	Statistics	15	Statistics	7

Power Maths Year 4, yearly overview

Textbook	Strand	Unit	Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1 Place value – 4-digit numbers (1)	8
	Number – number and place value	2 Place value – 4-digit numbers (2)	8
	Number – addition and subtraction	3 Addition and subtraction	16
	Measurement	4 Measure – area	5
	Number – multiplication and division	5 Multiplication and division (1)	12
Textbook B / Practice Workbook B (Term 2)	Number – multiplication and division	6 Multiplication and division (2)	16
	Measurement	7 Length and perimeter	6
	Number – fractions	8 Fractions (1)	9
	Number – fractions	9 Fractions (2)	8
	Number – fractions (including decimals and percentages)	10 Decimals (1)	12
Textbook C / Practice Workbook C (Term 3)	Number – fractions (including decimals and percentages)	11 Decimals (2)	7
	Measurement	12 Money	6
	Measurement	13 Time	5
	Geometry – properties of shapes	14 Geometry – angles and 2D shapes	8
	Statistics	15 Statistics	6
	Geometry – position and direction	16 Geometry – position and direction	6

Power Maths Year 5, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value within 1,000,000 (1)	8
	Number – number and place value	2	Place value within 1,000,000 (2)	6
	Number – addition and subtraction	3	Addition and subtraction	12
	Number – multiplication and division	4	Multiplication and division (1)	10
	Number – fractions (including decimals and percentages)	5	Fractions (1)	8
	Number – fractions (including decimals and percentages)	6	Fractions (2)	11
Textbook B / Practice Workbook B (Term 2)	Number – multiplication and division	7	Multiplication and division (2)	10
	Number – fractions (including decimals and percentages)	8	Fractions (3)	7
	Number – fractions (including decimals and percentages)	9	Decimals and percentages	15
	Measurement	10	Measure – perimeter and area	8
	Statistics	11	Graphs and tables	6
Textbook C / Practice Workbook C (Term 3)	Geometry – properties of shapes	12	Geometry – properties of shapes	12
	Geometry – position and direction	13	Geometry – position and direction	6
	Number – fractions (including decimals and percentages)	14	Decimals	15
	Number – number and place value	15	Negative numbers	4
	Measurement	16	Measure – converting units	10
	Measurement	17	Measure – volume and capacity	3

Power Maths Year 6, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value within 10,000,000	8
	Number – addition, subtraction, multiplication and division	2	Four operations (1)	8
	Number – addition, subtraction, multiplication and division	3	Four operations (2)	12
	Number - fractions	4	Fractions (1)	9
	Number - fractions	5	Fractions (2)	9
	Measurement	6	Measure – imperial and metric measures	5
Textbook B / Practice Workbook B (Term 2)	Ratio and proportion	7	Ratio and proportion	9
	Algebra	8	Algebra	11
	Number - fractions (including decimals and percentages)	9	Decimals	9
	Number - fractions (including decimals and percentages)	10	Percentages	8
	Measurement	11	Measure – perimeter, area and volume	11
Textbook C / Practice Workbook C (Term 3)	Statistics	12	Statistics	11
	Geometry – properties of shapes	13	Geometry – properties of shapes	12
	Geometry – position and direction	14	Geometry – position and direction	5
	Number – addition, subtraction, multiplication and division	15	Problem solving	14

Links to websites

Pearson <https://www.pearson.com/international-schools/british-curriculum/primary-curriculum/power-maths.html>

NCETM <https://www.ncetm.org.uk/teaching-for-mastery/>

NRICH maths <https://nrich.maths.org/>

Resources

An introduction to Power Maths <https://www.youtube.com/watch?v=6eqM50ulj6M>

Power up Power Maths <https://www.youtube.com/watch?v=6eqM50ulj6M>

Understand the Power Maths lessons <https://www.youtube.com/watch?v=dP1cRinTmAc>

Daily maths challenge <https://mathshub.thirdspacelearning.com/topical>

5 in 5 resources <https://mathshub.thirdspacelearning.com/resources?text=5+in+5>

Games and puzzles <https://nrich.maths.org/primary>

Subject leadership

Primary Subject Audit materials <https://www.ncetm.org.uk/classroom-resources/pska-primary-subject-knowledge-audit/>