MANLEY PARK
PRIMARY SCHOOL
GROWING TOGETHER

VISION

Manley Park: we all belong.

Together, we are committed to all learners being inspired to achieve academic success. We provide learning experiences that are relevant, motivational and challenging. Our curriculum and collaborative learning approaches nurture individual personal growth. Pupils become socially responsible citizens of our community and the world.

CURRICULUM INTENT

Intention one: Our learners will achieve excellent and sustained academic progress.

Intention two: Our learners will develop effective lifelong learning behaviours.

Intention three: Our learners will be supported to think critically and creatively.

Intention four: Our learners will become well informed and responsible citizens.

Maths

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EYFS Statutory Framework and the National Curriculum

EYFS Statutory Educational Programme:

- **Number ELG. Children at the expected level of development will:**
  • 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.
- **Numerical Patterns ELG. Children at the expected level of development will:**
  • Verbally count beyond 20, recognising the pattern of the counting system;
  • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
  • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Development Matters Objectives (Non statutory)

Nursery

- Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle)
- Say one number for each item in order: 1, 2, 3, 4, 5
- Show 'finger numbers' up to 5.
- Develop fast recognition of up to 3 objects, without having to count them individually
- Recite numbers past 5
- Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.
- Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'...
- Experiment with their own symbols and marks as well as numerals
- Solve real world mathematical problems with numbers up to 5.
- Talk about and explore 3D shapes (for example cubes and cuboids) using informal and mathematical language: corners, flat, edges, faces
- Talk about and explore 2D shapes (for example circles, rectangles and triangles) using informal and mathematical language: sides, straight, round
- Understand position through words alone – for example, "The bag is under the table," – with no pointing
- Compare quantities using language: 'more than'. 'fewer than'.
- Make comparisons between objects relating to size, length, weight and capacity.
- Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc
- Extend and create ABAB patterns – stick, leaf, stick, leaf

- Describe a familiar route
- Discuss routes and locations, using words like ‘in front of’ and ‘behind’.
- Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc
- Combine shapes to make new ones - e.g. an arch, a bigger triangle etc
- Notice and correct an error in a repeating pattern

Reception

- Count objects, actions and sounds.
- Subitise
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- Compare numbers.
- Understand the ‘one more than/one less than’ relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0–5 and some to 10.
- Select, rotate and manipulate shapes to develop spatial reasoning skills.
- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity.

National Curriculum

Purpose of study

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Aims

The national curriculum for Maths aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Maths in the Early Years Foundation Stage

Nursery - Term 1

	1	2	3	4	5	6	7	8	9	10	11	12
MNP Area of Learning	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure
MNP Strand	Counting	Counting	Counting	Counting	Counting	Counting	Time	Counting	Counting	2D and 3D Shapes	2D Shapes	Positional Language
Development Matters	Know that the last number reached when counting a small set of	Say one number for each item in order: 1, 2, 3, 4, 5	Show 'finger numbers' up to 5.	Develop fast recognition of up to 3 objects, without having to	Recite numbers past 5 (dropped into learning environment	Link numerals and amounts: for example, showing the right	Begin to describe a sequence of events, real or fictional, using words	Experiment with their own symbols and marks as well as numerals	Solve real world mathematical problems with numbers up to 5.	Talk about and explore 3D shapes (for example cubes and cuboids) using	Talk about and explore 2D shapes (for example circles, rectangles and	Understand position through words alone – for example, "The bag is

	objects tells you how many there are in total (cardinal principle)			count them individually	and fluency work across Counting unit)	number of objects to match the numeral, up to 5.	such as 'first', 'then'...			informal and mathematical language: corners, flat, edges, faces	triangles) using informal and mathematical language: sides, straight, round	under the table," – with no pointing

Term 2

	1	2	3	4	5	6	7	8	9	10	11	12
MNP Area of Learning	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure	Number and Pattern
MNP Strand	Comparing and Ordering	Comparing and Ordering	Patterns	AB Patterns	Counting	Counting	Counting	Counting	Positional Language	3D Shapes	3D Shapes	Patterns and AB Patterns
Development Matters	Compare quantities using language: 'more than'. 'fewer than'.	Make comparisons between objects relating to size, length, weight and capacity.	Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc	Extend and create ABAB patterns – stick, leaf, stick, leaf	Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle) Fluency: Recite numbers past 5	Say one number for each item in order: 1, 2, 3, 4, 5 Fluency: Recite numbers past 5	Show 'finger numbers' up to 5. Fluency: Recite numbers past 5	Develop fast recognition of up to 3 objects, without having to count them individually Fluency: Recite numbers past 5	Describe a familiar route Discuss routes and locations, using words like 'in front of' and 'behind'.	Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc	Combine shapes to make new ones - e.g. an arch, a bigger triangle etc	Notice and correct an error in a repeating pattern

Term 3

	1	2	3	4	5	6	7	8	9	10	11	12

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MNP Area of Learning	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure	Number and Pattern
MNP Strand	Counting	Counting	Counting	Counting	Comparing and Ordering	AB Patterns	Time	Comparing and Ordering	Positional Language	2D and 3D Shapes	3D Shapes	Counting
Development Matters	Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	Experiment with their own symbols and marks as well as numerals	Solve real world mathematical problems with numbers up to 5.	Compare quantities using language: 'more than'. 'fewer than'.	Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc Extend and create ABAB patterns – stick, leaf, stick, leaf	Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'...	Make comparisons between objects relating to size, length, weight and capacity.	Understand position through words alone – for example, "The bag is under the table," – with no pointing Describe a familiar route Discuss routes and locations, using words like 'in front of' and 'behind'	Talk about and explore 2D and 3D shapes (for example circles, rectangles, triangles, cubes and cuboids) using informal and mathematical language: sides, straight, round, face, edges, flat, corners	Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc Combine shapes to make new ones – an arch, a bigger triangle, etc	Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Recite numbers past 5 each day.

Reception Term 1

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
MNP Area of Learning	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure
MNP Strand	Matching	Sorting	Comparing and ordering	AB Patterns	Counting	Counting	Time	Composition of numbers up to 5	Composition of numbers up to 5	2D Shapes	2D Shapes	Position and Language
EYFS ELG												

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	Week 1	Week 2	Week 3	Week 4
Maths — No Problem! Area of learning	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern
Maths — No Problem! Strand	Matching	Sorting	Comparing and Ordering	AB Patterns
EYFS Early Learning Goal	Numerical Patterns: Compare quantities up to 10 in different contexts.	Numerical Patterns: Compare quantities up to 10 in different contexts.	Numerical Patterns: Compare quantities up to 10 in different contexts. Explore and represent patterns within numbers up to 10. ... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	Numerical Patterns: Explore and represent patterns within numbers up to 10.

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	Week 5	Week 6	Week 7	Week 8
Maths — No Problem! Area of learning	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern
Maths — No Problem! Strand	Counting	Counting	Time	Composition of Numbers up to Five
EYFS Early Learning Goal	Number: Have a deep understanding of numbers up to 10.	Number: Have a deep understanding of numbers up to 10. Numerical Patterns: Compare quantities up to 10 in different contexts.	Numerical Patterns: Explore and represent patterns within numbers up to 10. ... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	Number: Have a deep understanding of numbers up to 10. Subitise.

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	Week 9	Week 10	Week 11	Week 12
Maths — No Problem! Area of learning	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure
Maths — No Problem! Strand	Composition of Numbers up to 5	2D Shapes	2D Shapes	Positional Language
EYFS Early Learning Goal	Number: Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5.	Number: Have a deep understanding of numbers up to 10. ... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

Term 2

	1	2	3	4	5	6	7	8	9	10	11	12
MNP Area of Learning	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure
MNP Strand	Matching	Sorting	Comparing and ordering	AB Patterns	Counting	Counting	Time	Composition of numbers up to 5	Composition of numbers up to 5	2D Shapes	2D Shapes	Position and Language
EYFS ELG												

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	Week 1	Week 2	Week 3	Week 4
Maths — No Problem! Area of learning	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern
Maths — No Problem! Strand	Counting	Counting and Ordering	Counting	Addition
EYFS Early Learning Goal	Number: Have a deep understanding of numbers up to 10, including the composition of each number.	Numerical patterns: Compare quantities up to 10 in different contexts.	Numerical patterns: Compare quantities up to 10 in different contexts.	Number: Have a deep understanding of numbers up to 10, including the composition of each number.

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	Week 5	Week 6	Week 7	Week 8
Maths — No Problem! Area of learning	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern
Maths — No Problem! Strand	Comparing and Ordering	Counting	Counting	Patterns
EYFS Early Learning Goal	Numerical patterns: Compare quantities up to 10 in different contexts. Number: Subitise up to 5.	Number: Have a deep understanding of numbers up to 10. 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.	Number: Have a deep understanding of numbers up to 10. 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.	Numerical patterns: Explore and represent patterns within numbers up to 10.

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	Week 9	Week 10	Week 11	Week 12
Maths — No Problem! Area of learning	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure
Maths — No Problem! Strand	Measuring lengths and heights	Capacity - developing language	2D Shapes	3D Shapes
EYFS Early Learning Goal	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

Term 3

	1	2	3	4	5	6	7	8	9	10	11	12
MNP Area of Learning	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Number and Pattern	Shape, Space and Measure	Number and Pattern	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure	Shape, Space and Measure
MNP Strand	Matching	Sorting	Comparing and ordering	AB Patterns	Counting	Counting	Time	Composition of numbers up to 5	Composition of numbers up to 5	2D Shapes	2D Shapes	Position and Language
EYFS ELG												

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	Week 1	Week 2	Week 3	Week 4
Maths — No Problem! Area of learning	Number and Pattern	Number and Pattern	Number and Pattern	Number and Pattern
Maths — No Problem! Strand	Counting On to Add	Counting Forwards and Backwards	Counting to 20	Doubling
EYFS Early Learning Goal	Numerical patterns: Explore and represent patterns within numbers up to 10; Compare quantities up to 10 in different contexts.	Numerical patterns: Explore and represent patterns within numbers up to 10; Compare quantities up to 10 in different contexts.	Number: Have a deep understanding of number to 10. Numerical patterns: Compare quantities up to 10 in different contexts.	Numerical patterns: Explore and represent patterns within numbers up to 10.

	Week 5	Week 6	Week 7	Week 8
Maths — No Problem! Area of learning	Number and Pattern	Number and Pattern	Shape, Space and Measure	Shape, Space and Measure
Maths — No Problem! Strand	Halving and Sharing	Odds and Evens	Mass	Volume and Capacity
EYFS Early Learning Goal	Number: Have a deep understanding of number to 10. Numerical patterns: Compare quantities up to 10 in different contexts; Explore and represent patterns within numbers up to 10.	Numerical patterns: Explore and represent patterns within numbers up to 10.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. Numerical patterns: Compare quantities up to 10 in different contexts.	... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

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	Week 9	Week 10	Week 11	Week 12
Maths — No Problem! Area of learning	Shape, Space and Measure	Number and Pattern	Number and Pattern; Shape, Space and Measure	Number and Pattern
Maths — No Problem! Strand	Money	Data	All	Word Problems
EYFS Early Learning Goal	… rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. Number: Automatically recall number bonds up to 5. Numerical patterns: Compare quantities up to 10 in different contexts.	Number: Have a deep understanding of number to 10. Numerical patterns: Compare quantities up to 10 in different contexts; Explore and represent patterns within numbers up to 10.	Developing a strong grounding in number. … rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	Developing a strong grounding in number.

Bridging into the National Curriculum

Early Learning Goals

- **Number ELG Children at the expected level of development will:**
  - **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.

- **Numerical Patterns ELG Children at the expected level of development will:**
  • Verbally count beyond 20, recognising the pattern of the counting system;
  • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
  • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

How our early years curriculum prepares for the next stage of education

Early Learning Goals	NC Areas	Year 1 MNP
• 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.	**read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs represent and use number bonds and related subtraction facts within 20 add and subtract one-digit and two-digit numbers to 20, including zero** **solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.**	Chapters 1, 2, 3,from 1A
• Verbally count beyond 20, recognising the pattern of the counting system;	**count to and across 100, forwards and backwards,**	Chapters 4, 6, 7 from 1A

• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	**beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens given a number, identify one more and one less** **identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least read and write numbers from 1 to 20 in numerals and words.**	

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Delivering the National Curriculum

	Number	Addition and Subtraction
Nursery	Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle) Say one number for each item in order: 1, 2, 3, 4, 5 Show 'finger numbers' up to 5. Develop fast recognition of up to 3 objects, without having to count them individually Recite numbers past 5 Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than'. 'fewer than'. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc Extend and create ABAB patterns – stick, leaf, stick, leaf Notice and correct an error in a repeating pattern	Develop fast recognition of up to 3 objects, without having to count them individually Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than'. 'fewer than'.
Reception	Simple Matching Matching by Function Matching by Number Matching Different Orientations	Making 5 Identifying 5 Constructing Models of 5 Breaking Apart 5

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	Matching by Other Properties	Making Number Stories with 5
	Simple Sorting	1 Fewer Than
	Sorting Shapes	Adding and Subtracting Zero
	Identifying Sets	Counting Forwards
	Finding Sorting Rules	Counting Backwards
	Matching Amounts	Ordering Numbers
	Spotting Patterns Around Us	Changing the Amount in the Frame
	Exploring Abstract Patterns	Changing the Amount in the Frame
	Patterns Using 10 Objects	Adding to 5
	Exploring Non-Linear Patterns	Adding to 10
	Finding 5	Part Part Whole and Comparison
	Counting in Five Frames	Adding by Counting On
	Comparing Numbers of Objects	Comparing Quantities of Similar Items
	Comparing Numbers	Comparing Quantities of Different Sized Items
	Comparing Groups	Perceptual and Conceptual Subitising
	Identifying Representations of Five	1 More, 1 Fewer on a Ten Frame and Ordering
	Exploring Representations of 1 -5	Conceptual Subitising
	Visualising Zero	Number Bonds
	Recognise and Describe Patterns	Making 6
	Extend a Pattern	Number Bonds to 7-10
	Create a Pattern	Partitioning Into More Than 2 Parts
	Spot Mistakes in Patterns	Counting Sequences

	Abstract Patterns Understanding Odd and Even Numbers Finding Odd and Even Numbers Using Ten Frames to Show Odds and Evens Pairs	Counting On from 5 Adding On a Ten Frame Counting On from Any Number Counting On from a Hidden Number Counting Backwards Counting Back from 10 Finding 1 More and 1 Less Find the Quantity of a Hidden Collection Finding the Unknown Amount Counting to 20 Forwards and Backwards Making Numbers 1–20 Different Representations of Numbers 11–20 1 More, 1 Less Ordering Numbers to 20 Exploring the Term Double Doubling with Fingers Doubling on a Five Frame to a Ten Frame Recognising Doubles Doubles and Not Doubles Equal Sharing Halving Halving as the Opposite of Doubling

		Halving Patterns Sharing Between More Than 2 People Adding and Subtracting 1 Numberless Word Problems Understanding the Problem Addition Word Problems Subtraction Word Problems Creating Word Problems

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	Number	Addition and Subtraction (Whole number)
Year 1	Count to 100 (first 0 – 10, then to 20, then to 40 then to 100). Read and write numbers from 0 to 100 (first 0 – 10, then to 20, then to 40 then to 100). Compare and order numbers from 0 to 100 (first 0 – 10, then to 20, then to 40 then to 100). Make different number bonds for numbers up to 10. Make number stories Complete number patterns. Use a place-value chart to show numbers in tens and ones. Find how much more. Count in twos, fives and tens to 100. Say a number that is 1 more or 1 less than a 2-digit number.	Add by counting. Add by counting on. Make addition stories. Write addition equations. Subtract by crossing out. Subtract using number bonds. Subtract by counting back. Make subtraction stories. Write subtraction equations. Make a family of addition and subtraction facts. Add by making 10. Add by adding ones. Subtract by subtracting ones. Subtract by subtracting from 10. Solve word problems involving addition or subtraction.
Year 2	Count to 100. Read and write numbers to 100. Compare and arrange numbers within 100. Make and complete number patterns.	Add numbers without renaming. Add numbers with renaming. Subtract numbers without renaming. Subtract numbers with renaming. Add three numbers. Draw models for different situations.
Year 3	Count to 1000. Count in hundreds, tens and ones. Count in fifties. Count in fours and eights. Tell the value of a digit in a number. Compare and arrange numbers within 1000. Complete number patterns.	Add numbers without renaming. Add numbers with renaming. Subtract numbers without renaming. Subtract numbers with renaming. Solve word problems involving addition and subtraction.
Year 4	Count to 10 000. Count in thousands, hundreds, tens and ones. Count in twenty-fives. Count in sixes, sevens and nines. Tell the number that a digit stands for. Compare and arrange numbers within 10 000. Describe and complete number patterns. Round numbers and estimate sum and difference.	Add numbers without renaming. Add numbers with renaming. Add numbers mentally. Subtract numbers without renaming. Subtract numbers with renaming. Subtract numbers mentally. Solve word problems involving addition and subtraction.
Year 5	Read and write numbers to 1 000 000. Tell the place value of a digit in a number. Compare and arrange numbers within 1 000 000. Count forwards or backwards in steps of 1000, 10 000 and 100 000. Round numbers to the nearest 10, 100, 1000, 10 000 and 100 000.	Add whole numbers with more than 4 digits. Add numbers mentally. Subtract whole numbers with more than 4 digits. Subtract numbers mentally. Use rounding to check answers. Solve word problems involving addition, subtraction, multiplication and division, and a combination of these.
Year 6	Read and write numbers to 10 million. Compare and arrange numbers within 10 million. Tell the place value of a digit in a number. Round numbers to the nearest 10, 100, 1000, 10 000, 100 000 and 1 000 000.	Perform mental calculations. Use estimation to check answers to calculations. Use the order of operations. Solve problems involving addition and subtraction. multiplication and division.

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	Multiplication and Division	Fractions

	Multiplication and Division (Whole number)	Fractions
Year 1	Make equal groups. Add equal groups to find the total number of objects. Group things equally. Share things equally. Solve word problems about multiplication.	Show a half. Show a quarter. Group/share things to get a half or a quarter. Find a half or a quarter of a group of things.
Year 2	Do my 2, 5 and 10 times table. Write multiplication equations. Divide a number by 2, 5 and 10. Write multiplication and division equations. Write a family of multiplication and division facts. Recognise odd and even numbers. Solve word problems using the 2, 5 and 10 times tables. Solve word problems involving multiplication and division.	Make and show halves, quarters and thirds. Name and write a fraction. Name fractions that make one whole. Compare and order fractions. Count wholes with halves, quarters and thirds. Find part of a set and a quantity.
Year 3	Do my 3, 4 and 8 times table. Divide a number by 3, 4 and 8. Solve word problems involving the 3, 4 and 8 times tables. Solve word problems involving the division of 3, 4 and 8.	Count in tenths. Make number pairs that form one whole. Add and subtract two fractions. Find and list equivalent fractions. Write a fraction in its simplest form. Compare fractions. Find part of a set and fraction of a number. Share a number equally. Write fractions on the number line. Write fractions that are greater than 1. Solve word problems involving fractions.
Year 4	Multiply by 6, 7, 9, 11 and 12. Divide by 6, 7, 9, 11 and 12. Divide to find quotient and remainder. Solve word problems involving multiplication and division. Multiply without regrouping. Multiply with regrouping. Divide without regrouping. Divide with regrouping. Find the quotient and remainder in division. Solve word problems involving multiplication and division.	Count in hundredths. Write and show mixed numbers on a number line. Find equivalent fractions. Simplify fractions and mixed numbers. Add and subtract fractions. Solve word problems involving fractions.
Year 5	Find multiples and common multiples. Find factors and common factors. Identify prime and composite numbers. Recognise square numbers and cube numbers, and use the notation for squares (e.g. 42) and cubes (e.g. 23). Multiply numbers up to 4 digits by a 1-digit number. Multiply numbers up to 3 digits by a 2-digit number. Multiply and divide mentally. Multiply and divide numbers by 10, 100 and 1000. Divide 3-digit and 4-digit numbers. Solve word problems involving addition, subtraction, multiplication and division, and a combination of these.	Find equivalent fractions of a given fraction. Recognise mixed numbers and improper fractions and convert from one form to the other. Compare and order fractions. Add and subtract fractions. Multiply proper fractions and mixed numbers by whole numbers.
Year 6	Multiply numbers up to 4 digits by a 2-digit whole number. Divide numbers up to 4 digits by a 2-digit whole number. Interpret remainders in division. Identify common factors, common multiples and prime numbers. Solve problems involving multiplication and division. Solve problems involving the calculation and conversion of units of measure.	Find equivalent fractions using common multiples. Simplify fractions using common factors. Compare and order fractions. Add and subtract fractions. Multiply proper fractions. Divide proper fractions by whole numbers. Relate division of whole numbers to fractions and decimals.

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	Decimals	Percentages

	Decimals	Percentage
Year 1		
Year 2		
Year 3		
Year 4	Recognise and write tenths. Recognise and write hundredths. Compare numbers with the same number of decimal places. Complete number patterns involving decimals. Round decimals with one decimal place to the nearest whole number. Recognise and write decimal equivalents of 1/4, 1/2 and 3/4. Divide a 1- or 2-digit number by 10 and by 100.. Solve simple measure and money problems involving decimals.	
Year 5	Read and write decimals up to three decimal places. Compare and order decimals up to three decimal places. Write fractions as decimals. Add and subtract decimals. Round decimals with two decimal places to the nearest whole number and to one decimal place. Solve problems involving decimals up to three decimal places.	Recognise the per cent symbol (%). Find percentages of a given number. Interpret a percentage as a fraction of an amount.
Year 6	Relate division of whole numbers to fractions and decimals. Write fractions as decimals. Tell the place value of digits in a decimal number. Multiply and divide decimals with 1-digit and 2-digit whole numbers.	Calculate the percentage of a number and a quantity. Use percentage to describe changes. Use percentage to compare.

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	Length	Area and Perimeter	Volume
Nursery	Make comparisons between objects relating to size, length, weight and capacity.		
Reception	Sort and Compare Ordering from Shortest to Tallest Investigating Height Comparing Lengths Non-Standard Units Body Parts Using a Ruler Comparing Heights Estimating and Measuring		Empty and Full Empty, Full and Half-Full Empty, Full and Half-Full, Nearly Full and Nearly Empty Comparing Capacity Estimating Capacity Describing Different Volumes of Liquids Finding the Volume of Liquid in a Container Comparing Capacities Capacity of Everyday Objects Quantifying Capacity

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	Length	Area and Perimeter	Volume
Year 1	Compare the length of objects. Measure the length of objects.		Compare volume and capacity. Use half and a quarter to describe volume. Find volume and capacity.
Year 2	How to measure length in metres (m). How to measure length in centimetres (cm). When to use cm or m to measure length. How to compare and order length. How to measure and draw lines. How to solve word problems on length.		Compare volume. Measure volume in litres (l) and millilitres (ml). Solve word problems on volume.
Year 3	Write length in metres (m) and centimetres (cm). Convert length from m and cm to cm. Convert length from cm to m and cm. Write length in kilometres (km) and metres (m). Convert length from km and m to m. Convert length from m to km and m. Compare different lengths. Solve word problems on length.	Measure the total length around a shape. Find the perimeter of figures using a square grid . Find the perimeter of figures in centimetres (cm) and metres (m). Find the perimeter of squares and rectangles	Measure volume in millilitres (ml) and litres (l). Measure capacity in ml and L Write volume in ml and L Write capacity in ml and L Solve word problems on volume and capacity
Year 4	Measure and estimate length. Convert units of length.	Measure perimeter in different units.	Measure and estimate volume. Convert units of volume.
Year 5	Convert measurements of length. Solve problems involving measurements.	Find the perimeter of a figure. Find the area of a figure. Use scale diagrams to find the perimeter and the area of a figure. Estimate the area of a figure.	Find and compare the volumes of solids. Find and compare the capacity of rectangular boxes. Estimate volume and capacity. Convert units of volume. Solve word problems involving volume.
Year 6		Find the perimeter and the area of rectangles, triangles and parallelograms. Use formulae to find the area of rectangles, triangles and parallelograms. Use the area of rectangles to find the area of other types of polygons.	Find the volume of solids by counting unit cubes. Calculate the volume of cubes and cuboids in standard units (mm3, cm3, m3 and km3). Solve problems involving volume.

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	Geometry	Mass	Temperature
Nursery	Talk about and explore 3D shapes (for example cubes and cuboids) using informal and mathematical language: corners, flat, edges, faces Talk about and explore 2D shapes (for example circles, rectangles and triangles) using informal and mathematical language: sides, straight, round Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc Combine shapes to make new ones - e.g. an arch, a bigger triangle etc	Make comparisons between objects relating to size, length, weight and capacity. ... rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.	
Reception	Comparing 2D Shapes Comparing Squares and Rectangles Identifying Triangles Identifying Squares Triangles and Squares Identifying Rectangles Making Rectangles Identifying Circles Making Figures using 2D Shapes Making Figures using 2D Shapes (Partner Work) Finding 2D Shapes in 3D Shapes Describing Shapes Filling a Space Cube Cuboid Cylinder Sphere Creating and Copying 3D Constructions	Heavy and Light Exploring Mass Comparing Masses Using Non-Standard Units to Measure Mass	

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	Geometry	Mass	Temperature
Year 1	Name solids and shapes. Look for shapes in solids. Group shapes. Make and complete patterns with shapes.	Compare the mass of objects. Find the mass of objects.	
Year 2	Name triangles, quadrilaterals and polygons. Identify the number of sides and vertices of a shape. Identify the lines of symmetry of a shape or figure. Form different figures with shapes. Name the shapes that make up a figure. Sort shapes. Draw figures on a square grid and a dot grid. Make and complete patterns. Tell how patterns are formed from shapes. Move shapes. Turn shapes. Recognise flat faces and curved surfaces. Name and describe spheres, cuboids, cubes, cylinders, cones, pyramids and prisms. Identify the number of faces, edges and vertices of a shape. Fold two-dimensional shapes into three-dimensional ones. Group shapes in different ways. Form structures with shapes. Make patterns with shapes.	Measure mass in kilograms (kg). Measure mass in grams (g). Compare and order mass. Solve word problems on mass.	Read a thermometer. Measure and write down the temperature.
Year 3	Recognise an angle. Find angles in shapes. Find a right angle, an acute angle and an obtuse angle. Compare the sizes of angles. Make a half turn, a three-quarters turn and a full turn.	Read the scales for mass in kilograms (kg) and grams (g). Solve word problems on mass.	
Year 4	Identify acute and obtuse angles. Compare and order angles. Compare and classify triangles and quadrilaterals. Identify lines of symmetry in 2-D shapes. Complete a simple symmetrical figure with respect to a specific line of symmetry.	Measure and estimate mass. Convert units of mass.	
Year 5	Identify acute angles, right angles, obtuse angles and reflex angles. Draw and measure given angles. Identify angles on a straight line and angles that meet at a point. Find unknown angles in squares and rectangles. Identify regular polygons. Identify 3-D shapes from 2-D drawings.	Convert measurements of mass. Solve problems involving measurements.	Tell the temperature. Solve problems involving measurements.
Year 6	Recognise angles that meet at a point, angles on a straight line, and vertically opposite angles. Find unknown angles in triangles, quadrilaterals and regular polygons. Identify the radius, diameter, circumference and centre of a circle. Draw 2-D shapes using given dimensions and angles. Identify and draw nets of 3-D shapes.		

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	Money	Time	Graphs
Nursery		Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'...	
Reception	Recognising Coins Shopping with Coins Combining Coins Sharing Money Equally Giving Change	Ordering by Time Day and Night Ordering Events in the Day Days of the Week Birthdays	Pictograms Collecting Data Interpreting Data Recording Data Tally Charts

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	Money	Time	Graphs
Year 1	Recognise coins. Recognise notes.	Tell time to the hour. Tell time to the half hour. Compare different times. Recognise dates on a calendar.	
Year 2	Name coins and notes. Count an amount of money. Show amounts of money in different ways. Exchange coins and notes. Compare amounts of money. Calculate change. Solve word problems on money.	Tell and write the time to 5 minutes. Draw hands on a clock face to show time. Find the duration of time. Find the ending or starting time. Compare and sequence intervals of time. Know the number of minutes in an hour. Know the number of hours in a day.	Read information from pictograms, block diagrams, tally charts and tables. Make pictograms, block diagrams, tally charts and tables. Solve problems using information from pictograms, block diagrams, tally charts and tables.
Year 3	Name the amount of money in pounds and pence. Use different ways to show the same amount of money. Add money in pounds and pence. Subtract money in pounds and pence. Calculate change in pounds and pence. Solve word problems on money.	Tell and write time in a.m. and in p.m. Tell and write time using "past" and "to". Tell and write time shown on different types of clocks. Measure time in seconds, hours and minutes. Find starting time, ending time and duration. Change minutes to seconds, and seconds to minutes. Find the number of days using a calendar. Know the number of days in each month, year and leap year.	Draw picture graphs and bar graphs. Read and interpret bar graphs. Solve problems using information from bar graphs.
Year 4	Count an amount of money and write it using decimals. Compare different amounts of money. Round money to the nearest £ and to the nearest £10. Estimate total amounts of money. Solve problems involving money.	Tell time using the 24-hour clock. Change time in minutes to seconds. Change time in hours to minutes. Change time in years to months. Change time in months to years. Find the duration, starting time and finishing time. Solve word problems on time.	Use a table to show information. Draw, read and interpret tables, picture graphs, bar graphs and line graphs. Solve problems using information from tables and graphs.
Year 5		Convert measurements of time. Solve problems involving measurements.	Read and interpret information in a timetable. Read, interpret and complete information in a table. Read and interpret information from a line graph. Solve word problems using information from a line graph.
Year 6			Calculate and interpret the mean as an average. Draw and read pie charts. Draw and read graphs. Solve problems using information provided by graphs.

N.B. All graphs used in science are introduced after they have been introduced in Maths. E.g. Y3 Bar graphs Spr 1. Used in Science from Spr 2

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	Position and Movement	Ratio	Negative Numbers	Algebra	Roman Numerals
Nursery	Understand position through words alone – for example, "The bag is under the table," – with no pointing Describe a familiar route Discuss routes and locations, using words like 'in front of' and 'behind'.				
Reception	Navigating an Obstacle Course Locating Items in the Classroom				

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	Position and Movement	Ratio	Negative Numbers	Algebra	Roman Numerals
Year 1	Name positions in a race and in a queue. Name positions from the left and from the right. Use words such as before, after, next to, last and between to name positions. Describe positions. Describe movements. Describe turns.				
Year 2					
Year 3					
Year 4	Describe positions using coordinates. Plot points and form figures on the grid. Describe movement including translation of figures.				Read and write Roman numerals for 1 to 20. Read and write Roman numerals to 100.
Year 5	Write the coordinates of points. Describe translations and reflections. Find the position of a shape after translation or after reflection.				Write Roman numerals up to 1000. Write years in Roman numerals.
Year 6	Use coordinate grids with negative numbers. Describe positions of points with coordinates. Draw, translate and reflect simple shapes on the coordinate plane.	Compare quantities and numbers using ratios. Solve problems involving ratios.	Add and subtract negative numbers. Use negative numbers in context. Solve problems involving negative numbers.	Describe and complete a pattern. Write and evaluate algebraic expressions. Write and use formulae. Solve equations.	

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N.B

Year 1 order altered from Maths No Problem Textbooks to support with transition from Reception to KS1. High focus on concrete earlier in the year and exposure to Geometry.

MNP					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Numbers to 10 Numbers bonds Addition within 10 Subtraction within 10	Numbers to 20 Addition and Subtraction within 20	Positions Numbers to 40 Addition and Subtraction word problems	Multiplication Division Fractions	Numbers to 100 Shapes and Patterns Space	Money Length and Height Volume and Capacity Mass (Inc in year 2)
MPPS					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

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Shapes and Patterns Numbers to 10 Number bonds	Addition within 10 Length and Height Subtraction within 10	Numbers to 20 Addition and Subtraction to 20	Numbers to 40 Addition and Subtraction to 40	Multiplication Division Fractions Numbers to 100	Positions Space *Money *Volume and Capacity *Mass (*inc in year 2)