

## EYFS PROGRESSION

### Progression in 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	Positional Language	Counting	Counting	2D Shapes	2D and 3D Shapes	Time
Development Matters	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  (dropped into learning environment and fluency work across Counting unit)	Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	Understand position through words alone – for example, "The bag is under the table," – with no pointing	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 2D shapes (for example circles, rectangles and triangles) using informal and mathematical language: sides, straight, round	Talk about and explore 3D shapes (for example cubes and cuboids) using informal and mathematical language: corners, flat, edges, faces	Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'...

#### 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,	Talk about and identify the patterns around them. For example:	Extend and create ABAB patterns – stick, leaf, stick, leaf	Know that the last number reached when counting a	Say one number for each item in order: 1, 2, 3, 4, 5	Show 'finger numbers' up to 5.  Fluency: Recite	Develop fast recognition of up to 3 objects, without having to	Describe a familiar route  Discuss routes and	Select shapes appropriately: flat surfaces for building, a	Combine shapes to make new ones - e.g. an arch, a	Notice and correct an error in a repeating pattern

		weight and capacity.	stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc		small set of objects tells you how many there are in total (cardinal principle)  Fluency: Recite numbers past 5	Fluency: Recite numbers past 5	numbers past 5	count them individually  Fluency: Recite numbers past 5	locations, using words like 'in front of' and 'behind'.	triangular prism for a roof, etc	bigger triangle etc	
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### Term 3

	1	2	3	4	5	6	7	8	9	10	11	12
<b>MNP Area of Learning</b>	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
<b>MNP Strand</b>	Counting	Counting	Counting	Counting	Comparing and Ordering	AB Patterns	Time	Comparing and Ordering	Positional Language	2D and 3D Shapes	3D Shapes	Counting
<b>Development Matters</b>	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.

### Progression in Reception

**Term 1**

	1	2	3	4	5	6	7	8	9	10	11	12
<b>MNP Area of Learning</b>	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
<b>MNP Strand</b>	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
<b>EYFS ELG</b>	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 across all areas of maths inc shape, space and measure.	Explore and represent patterns within numbers up to 10	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.	Number: Have a deep understanding of numbers up to 10.  ...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	Number: Have a deep understanding of numbers up to 10.  Subitise	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 across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.

**Term 2**

	1	2	3	4	5	6	7	8	9	10	11	12
<b>MNP Area of Learning</b>	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
<b>MNP Strand</b>	Counting	Counting and ordering	Counting	Addition	Comparing and ordering	Counting	Counting	Patterns	Measuring lengths and heights	Capacity - developing language	2D shapes	3D shapes

<b>EYFS ELG</b>	Number: Have a deep understanding of numbers 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.		Numerical Patterns: Compare quantities up to 10 in different contexts.  Number: subitise up to 5.	Number: Have a deep understanding of numbers 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 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.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.
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### Term 3

	1	2	3	4	5	6	7	8	9	10	11	12
<b>MNP Area of Learning</b>	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
<b>MNP Strand</b>	Counting on to add	Counting forwards and backwards	Counting to 20	Doubling	Halving and sharing	Odd and even	Mass	Volume and capacity	Money	Data	All	Word problems
<b>EYFS ELG</b>	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 to 10 in	Numerical patterns: Explore and represent patterns within numbers up to 10.	Number: Have a deep understanding of number to 10.	Numerical patterns: Explore and represent patterns within numbers up to 10.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	...rich opportunities for children to develop their spatial reasoning across all areas of maths inc shape, space and measure.	Number: Have a deep understanding of number to 10.  Numerical patterns: compare quantities to 10 in different	Develop a strong grounding in number.  ...rich opportunities for children to develop their spatial reasoning across all areas of maths inc	Develop a strong grounding in number.

			different contexts.				Numerical patterns: compare quantities to 10 in different contexts.		Number: Automatically recall number bonds to 5.  Numerical patterns: compare quantities to 10 in different contexts.	contexts. Explore and represent patterns within numbers up to 10.	shape, space and measure.	
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	Number	Addition and Subtraction	Length	Volume
<b>Nursery</b>	<ul style="list-style-type: none"> <li>Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle)</li> <li>Say one number for each item in order: 1, 2, 3, 4, 5</li> <li>Show 'finger numbers' up to 5.</li> <li>Develop fast recognition of up to 3 objects, without having to count them individually</li> <li>Recite numbers past 5</li> <li>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.</li> <li>Experiment with their own symbols and marks as well as numerals</li> <li>Solve real world mathematical problems with numbers up to 5.</li> <li>Compare quantities using language: 'more than', 'fewer than'.</li> <li>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</li> <li>Extend and create ABAB patterns – stick, leaf, stick, leaf</li> <li>Notice and correct an error in a repeating pattern</li> </ul>	<ul style="list-style-type: none"> <li>Develop fast recognition of up to 3 objects, without having to count them individually</li> <li>Solve real world mathematical problems with numbers up to 5.</li> <li>Compare quantities using language: 'more than', 'fewer than'.</li> </ul>	<ul style="list-style-type: none"> <li>Make comparisons between objects relating to size, length, weight and capacity.</li> </ul>	
<b>Reception</b>	<ul style="list-style-type: none"> <li>Simple Matching</li> <li>Matching by Function</li> <li>Matching by Number</li> </ul>	<ul style="list-style-type: none"> <li>Making 5</li> <li>Identifying 5</li> <li>Constructing Models of 5</li> </ul>	<ul style="list-style-type: none"> <li>Sort and Compare</li> <li>Ordering from Shortest to Tallest</li> <li>Investigating Height</li> </ul>	<ul style="list-style-type: none"> <li>Empty and Full</li> <li>Empty, Full and Half-Full</li> <li>Empty, Full and Half-Full, Nearly Full</li> </ul>

	<ul style="list-style-type: none"> <li>• Matching Different Orientations</li> <li>• Matching by Other Properties</li> <li>• Simple Sorting</li> <li>• Sorting Shapes</li> <li>• Identifying Sets</li> <li>• Finding Sorting Rules</li> <li>• Matching Amounts</li> <li>• Spotting Patterns Around Us</li> <li>• Exploring Abstract Patterns</li> <li>• Patterns Using 10 Objects</li> <li>• Exploring Non-Linear Patterns</li> <li>• Finding 5</li> <li>• Counting in Five Frames</li> <li>• Comparing Numbers of Objects</li> <li>• Comparing Numbers</li> <li>• Comparing Groups</li> <li>• Identifying Representations of Five</li> <li>• Exploring Representations of 1 -5</li> <li>• Visualising Zero</li> <li>• Recognise and Describe Patterns</li> <li>• Extend a Pattern</li> <li>• Create a Pattern</li> <li>• Spot Mistakes in Patterns</li> <li>• Abstract Patterns</li> <li>• Understanding Odd and Even Numbers</li> <li>• Finding Odd and Even Numbers</li> <li>• Using Ten Frames to Show Odds and Evens Pairs</li> </ul>	<ul style="list-style-type: none"> <li>• Breaking Apart 5</li> <li>• Making Number Stories with 5</li> <li>• 1 Fewer Than</li> <li>• Adding and Subtracting Zero</li> <li>• Counting Forwards</li> <li>• Counting Backwards</li> <li>• Ordering Numbers</li> <li>• Changing the Amount in the Frame</li> <li>• Changing the Amount in the Frame</li> <li>• Adding to 5</li> <li>• Adding to 10</li> <li>• Part Part Whole and Comparison</li> <li>• Adding by Counting On</li> <li>• Comparing Quantities of Similar Items</li> <li>• Comparing Quantities of Different Sized Items</li> <li>• Perceptual and Conceptual Subitising</li> <li>• 1 More, 1 Fewer on a Ten Frame and Ordering</li> <li>• Conceptual Subitising</li> <li>• Number Bonds</li> <li>• Making 6</li> <li>• Number Bonds to 7-10</li> <li>• Partitioning Into More Than 2 Parts</li> <li>• Counting Sequences</li> <li>• Counting On from 5</li> <li>• Adding On a Ten Frame</li> <li>• Counting On from Any Number</li> <li>• Counting On from a Hidden Number</li> <li>• Counting Backwards</li> <li>• Counting Back from 10</li> <li>• Finding 1 More and 1 Less</li> <li>• Find the Quantity of a Hidden Collection</li> <li>• Finding the Unknown Amount</li> <li>• Counting to 20 Forwards and Backwards</li> <li>• Making Numbers 1-20</li> <li>• Different Representations of Numbers 11-20</li> <li>• 1 More, 1 Less</li> <li>• Ordering Numbers to 20</li> <li>• Exploring the Term Double</li> <li>• Doubling with Fingers</li> <li>• Doubling on a Five Frame to a Ten Frame</li> <li>• Recognising Doubles</li> <li>• Doubles and Not Doubles</li> <li>• Equal Sharing</li> <li>• Halving</li> <li>• Halving as the Opposite of Doubling</li> <li>• Halving Patterns</li> <li>• Sharing Between More Than 2 People</li> <li>• Adding and Subtracting 1</li> <li>• Numberless Word Problems</li> <li>• Understanding the Problem</li> <li>• Addition Word Problems</li> <li>• Subtraction Word Problems</li> <li>• Creating Word Problems</li> </ul>	<ul style="list-style-type: none"> <li>• Comparing Lengths</li> <li>• Non-Standard Units</li> <li>• Body Parts</li> <li>• Using a Ruler</li> <li>• Comparing Heights</li> <li>• Estimating and Measuring</li> </ul>	<ul style="list-style-type: none"> <li>• and Nearly Empty</li> <li>• Comparing Capacity</li> <li>• Estimating Capacity</li> <li>• Describing Different Volumes of Liquids</li> <li>• Finding the Volume of Liquid in a Container</li> <li>• Comparing Capacities</li> <li>• Capacity of Everyday Objects</li> <li>• Quantifying Capacity</li> </ul>
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	Length	Area and Perimeter	Volume	Geometry	Mass
<b>Nurse ry</b>	Make comparisons between objects relating to size, length, weight and capacity.				
<b>Recep tion</b>	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	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.
				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

	Money	Time	Graphs	Position and Movement
<b>Nursery</b>		Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'...		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'.
<b>Reception</b>	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	Navigating an Obstacle Course  Locating Items in the Classroom

### Mastering Number: Overview of content – Reception

Strand/ Half-term	Subitising	Cardinality, ordinality and counting	Composition	Comparison
<b>1</b>  <b>Children will:</b>	<ul style="list-style-type: none"> <li>perceptually subitise within 3</li> <li>identify sub-groups in larger arrangements</li> <li>create their own patterns for numbers within 4</li> <li>practise using their fingers to represent quantities which they can subitise</li> <li>experience subitising in a range of contexts, including temporal patterns made by sounds.</li> </ul>	<ul style="list-style-type: none"> <li>relate the counting sequence to cardinality, seeing that the last number spoken gives the number in the entire set</li> <li>have a wide range of opportunities to develop their knowledge of the counting sequence, including through rhyme and song</li> <li>have a wide range of opportunities to develop 1:1 correspondence, including by coordinating movement and counting</li> <li>have opportunities to develop an understanding that anything can be counted, including actions and sounds</li> <li>explore a range of strategies which support accurate counting.</li> </ul>	<ul style="list-style-type: none"> <li>see that all numbers can be made of 1s</li> <li>compose their own collections within 4.</li> </ul>	<ul style="list-style-type: none"> <li>understand that sets can be compared according to a range of attributes, including by their numerosity</li> <li>use the language of comparison, including 'more than' and 'fewer than'</li> <li>compare sets 'just by looking'.</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>continue from first half-term</li> </ul>	<ul style="list-style-type: none"> <li>continue to develop their counting skills</li> <li>explore the cardinality of 5, linking this to dice patterns and 5 fingers on 1 hand</li> </ul>	<ul style="list-style-type: none"> <li>explore the concept of 'wholes' and 'parts' by looking at a range of objects that are</li> </ul>	<ul style="list-style-type: none"> <li>compare sets using a variety of strategies, including 'just by</li> </ul>



<b>Children will:</b>	<ul style="list-style-type: none"> <li>subitise within 5, perceptually and conceptually, depending on the arrangements.</li> </ul>	<ul style="list-style-type: none"> <li>begin to count beyond 5</li> <li>begin to recognise numerals, relating these to quantities they can subitise and count.</li> </ul>	<p>composed of parts, some of which can be taken apart and some of which cannot</p> <ul style="list-style-type: none"> <li>explore the composition of numbers within 5.</li> </ul>	<p>looking', by subitising and by matching</p> <ul style="list-style-type: none"> <li>compare sets by matching, seeing that when every object in a set can be matched to one in the other set, they contain the same number and are equal amounts.</li> </ul>
<b>3 Children will:</b>	<ul style="list-style-type: none"> <li>increase confidence in subitising by continuing to explore patterns within 5, including structured and random arrangements</li> <li>explore a range of patterns made by some numbers greater than 5, including structured patterns in which 5 is a clear part</li> <li>experience patterns which show a small group and '1 more'</li> <li>continue to match arrangements to finger patterns.</li> </ul>	<ul style="list-style-type: none"> <li>continue to develop verbal counting to 20 and beyond</li> <li>continue to develop object counting skills, using a range of strategies to develop accuracy</li> <li>continue to link counting to cardinality, including using their fingers to represent quantities between 5 and 10</li> <li>order numbers, linking cardinal and ordinal representations of number.</li> </ul>	<ul style="list-style-type: none"> <li>continue to explore the composition of 5 and practise recalling 'missing' or 'hidden' parts for 5</li> <li>explore the composition of 6, linking this to familiar patterns, including symmetrical patterns</li> <li>begin to see that numbers within 10 can be composed of '5 and a bit'.</li> </ul>	<ul style="list-style-type: none"> <li>continue to compare sets using the language of comparison, and play games which involve comparing sets</li> <li>continue to compare sets by matching, identifying when sets are equal</li> <li>explore ways of making unequal sets equal.</li> </ul>
<b>4 Children will:</b>	<ul style="list-style-type: none"> <li>explore symmetrical patterns, in which each side is a familiar pattern, linking this to 'doubles'.</li> </ul>	<ul style="list-style-type: none"> <li>continue to consolidate their understanding of cardinality, working with larger numbers within 10</li> <li>become more familiar with the counting pattern beyond 20.</li> </ul>	<ul style="list-style-type: none"> <li>explore the composition of odd and even numbers, looking at the 'shape' of these numbers</li> <li>begin to link even numbers to doubles</li> <li>begin to explore the composition of numbers within 10.</li> </ul>	<ul style="list-style-type: none"> <li>compare numbers, reasoning about which is more, using both an understanding of the 'howmanyness' of a number, and its position in the number system.</li> </ul>
<b>5 Children will:</b>	<ul style="list-style-type: none"> <li>continue to practise increasingly familiar subitising arrangements, including those which expose '1 more' or 'doubles' patterns</li> <li>use subitising skills to enable them to identify when patterns show the same number but in a different</li> </ul>	<ul style="list-style-type: none"> <li>continue to develop verbal counting to 20 and beyond, including counting from different starting numbers</li> <li>continue to develop confidence and accuracy in both verbal and object counting.</li> </ul>	<ul style="list-style-type: none"> <li>explore the composition of 10.</li> </ul>	<ul style="list-style-type: none"> <li>order sets of objects, linking this to their understanding of the ordinal number system.</li> </ul>

	<p>arrangement, or when patterns are similar but have a different number</p> <ul style="list-style-type: none"> <li>• subitise structured and unstructured patterns, including those which show numbers within 10, in relation to 5 and 10</li> <li>• be encouraged to identify when it is appropriate to count and when groups can be subitised.</li> </ul>			
<b>6</b>	In this half-term, the children will consolidate their understanding of concepts previously taught through working in a variety of contexts and with different numbers.			

## BRIDGING INTO THE NATIONAL CURRICULUM

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

Early Learning Goals	NC Areas	Year 1 MNP
<ul style="list-style-type: none"> <li>• Have a deep understanding of number to 10, including the composition of each number;</li> <li>• Subitise (recognise quantities without counting) up to 5;</li> <li>• 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.</li> </ul>	<p><b>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</b></p>	<p>Chapter 1</p> <p>In this chapter, pupils will explore numbers to 10. They will count using one-to-one correspondence and use ten frames to represent numbers. They will then write numbers using both numerals and words. Pupils are introduced to the concept of 0 by counting backwards from numbers below 10. To complete the learning in the chapter, pupils will compare numbers using the terms 'greater than', 'less than' and 'as many as'. Pupils will explore which numbers are greatest and smallest in a series, and order numbers to show value. In the final lesson, pupils will show '1 more' and '1</p>

	<p><b>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 - 9</math>.</b></p>	<p>less' using concrete materials.</p> <p>Chapter 2 In this chapter, pupils will explore the building blocks of numbers. In the first lesson, pupils will learn different ways of making numbers using number bond diagrams. In the second lesson, they will use their understanding of number bonds to create number stories using pictorial representations. This chapter is designed to support pupils' understanding of number and the versatility of numbers for later use in mental methods.</p> <p>Chapter 3 In this chapter, pupils will come across different ways of adding to 10. They will encounter the part-whole diagram and begin to lay the foundations of the inverse of addition. They will also begin to make their own addition equations in order to support the deeper understanding of the processes of addition. Pupils will have the opportunity to observe the commutative nature of addition.</p>
<ul style="list-style-type: none"> <li>Verbally count beyond 20, recognising the pattern of the counting system;</li> <li>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;</li> <li>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</li> </ul>	<p><b>count to and across 100, forwards and backwards, 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.</b></p>	<p>Chapter 4 In this chapter, pupils will learn that subtraction equations can be completed in three ways: by crossing out, by using number bonds and by counting back. They will continue to use manipulatives and pictorial representations to support their understanding and use vocabulary appropriately.</p> <p>Chapter 6 In this chapter, pupils will look at numbers up to 20, focusing on numbers between 10 and 20. They will count and write to 20, compare and order numbers, and see patterns within 20. Multiple representations are used including number lines.</p> <p>Chapter 7 In this chapter, pupils will learn different ways to add and subtract numbers within 20. They will use their understanding of addition and subtraction to create fact families.</p>

## NATIONAL CURRICULUM

### 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 mathematics 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 non- routine 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.

## **Attainment targets**

*Refer to Mathematics Programme of Study Key Stages 1 and 2, National Curriculum England*

### **Key stage 1**

*Refer to Mathematics Programme of Study Key Stages 1 and 2, National Curriculum England*

### **Key stage 2**

*Refer to Mathematics Programme of Study Key Stages 1 and 2, National Curriculum England*

## DELIVERING THE NATIONAL CURRICULUM

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**National Curriculum Progression**

	Number	Addition and Subtraction (Whole number)
Year 1	<p>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.</p>	<p>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.</p>
Year 2	<p>Count to 100. Read and write numbers to 100. Compare and arrange numbers within 100. Make and complete number patterns.</p>	<p>Add numbers without renaming. Add numbers with renaming. Subtract numbers without renaming. Subtract numbers with renaming. Add three numbers. Draw models for different situations.</p>
Year 3	<p>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.</p>	<p>Add numbers without renaming. Add numbers with renaming. Subtract numbers without renaming. Subtract numbers with renaming. Solve word problems involving addition and subtraction.</p>
Year 4	<p>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.</p>	<p>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.</p>
Year 5	<p>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.</p>	<p>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.</p>
Year 6	<p>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.</p>	<p>Perform mental calculations. Use estimation to check answers to calculations. Use the order of operations. Solve problems involving addition and subtraction. multiplication and division.</p>

	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. 4 <sup>2</sup> ) and cubes (e.g. 2 <sup>3</sup> ). 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.

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



	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 (mm <sup>3</sup> , cm <sup>3</sup> , m <sup>3</sup> and km <sup>3</sup> ). Solve problems involving volume.

	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.		

	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.

	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.	

**N.B** Year 1 order altered from Maths No Problem Textbooks to support 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
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)

## MASTERING NUMBERING

### Mastering Number: Overview of content – Year 1

Strand/ Half-term	Subitising	Cardinality, ordinality and counting	Composition	Comparison	Addition and subtraction/ Number facts
<b>1</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>revisit subitising within 5 using perceptual subitising</li> <li>practise conceptual subitising of bigger numbers as they become more familiar with</li> </ul>	<ul style="list-style-type: none"> <li>explore the linear number system within 10, looking at a range of ordinal representations</li> </ul>	<ul style="list-style-type: none"> <li>focus on the composition of numbers within 10, with a particular emphasis on the composition of</li> </ul>		Although children will not be looking at number bonds expressed as equations, their work on the composition of numbers within 10 will be

	<p>patterns made by the numbers 5–10.</p>	<ul style="list-style-type: none"> <li>explore the link between the 'staircase' pattern and a number track.</li> </ul>	<p>numbers 6, 7, 8 and 9 as '5 and a bit', as well as exploring the composition of numbers 5 and 6 in-depth</p> <ul style="list-style-type: none"> <li>explore the composition of odd and even numbers, identifying that even numbers are made of 2s and odd numbers have 'an extra 1' – they will link this to the 'shape' of these numbers.</li> </ul>		<p>developing their knowledge of number bonds.</p>
<p><b>2</b> <b>Children will:</b></p>	<ul style="list-style-type: none"> <li>continue to practise conceptually subitising numbers they have already explored the composition of.</li> </ul>	<ul style="list-style-type: none"> <li>review the linear number system to 10 as they compare numbers.</li> </ul>	<ul style="list-style-type: none"> <li>continue to explore the composition of the numbers 7–9 in-depth, linking this to their understanding of odd and even numbers</li> <li>explore the composition of 10, developing a systematic approach to finding pairs that sum to 10.</li> </ul>	<ul style="list-style-type: none"> <li>revisit what is meant by 'comparing' and see that quantities can be compared according to different attributes, including numerosity.</li> </ul>	<p>As above.</p>
<p><b>3</b> <b>Children will:</b></p>	<ul style="list-style-type: none"> <li>continue to practise conceptually subitising numbers they have already explored the composition of.</li> </ul>		<ul style="list-style-type: none"> <li>review the composition of numbers within 10, linking these to part-part-whole representations</li> <li>practise recalling missing parts for numbers within 10.</li> </ul>	<ul style="list-style-type: none"> <li>compare numbers within 10, linking this to their understanding of the linear system</li> <li>use the inequality symbol to create expressions, e.g. <math>7 &gt; 2</math>, and use the language of 'greater than' and 'less than'</li> <li>reason about inequalities, drawing on their knowledge of the</li> </ul>	<ul style="list-style-type: none"> <li>develop their recall of number bonds within 10, through the use of exercises which use written numerals but not the symbols +, −, or =.</li> </ul>

				composition of numbers, e.g. Is this true or false? 3 and 2 is less than 4.	
<b>4</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>continue to practise conceptually subitising numbers they have already explored the composition of.</li> </ul>	<ul style="list-style-type: none"> <li>review the linear number system to 10, looking at a range of representations, including a number line</li> <li>explore the use of 'midpoints' to enable them to identify the location of other numbers.</li> </ul>	<ul style="list-style-type: none"> <li>review the composition of odd and even numbers, linking this to doubles and near doubles</li> <li>explore the composition of the numbers 11–20, seeing representations which show the structure of these numbers as 'ten and a bit'.</li> </ul>		<ul style="list-style-type: none"> <li>continue to develop their recall of bonds within 10, through the use of exercises which do NOT involve written equations, such as <math>4 + 3 = ?</math></li> <li>identify doubles and near doubles through visual representations of odd and even numbers.</li> </ul>
<b>5</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>continue to practise conceptually subitising numbers they have already explored the composition of.</li> <li>conceptually subitise numbers within 20 as they become more familiar with the composition of numbers within 20.</li> </ul>	<ul style="list-style-type: none"> <li>review the linear number system to 20, looking at a range of representations, including a number line</li> <li>explore the use of 'midpoints' to enable them to identify the location of other numbers.</li> </ul>	<ul style="list-style-type: none"> <li>continue to explore representations which expose the composition of numbers within 20.</li> </ul>	<ul style="list-style-type: none"> <li>compare numbers within 20, including questions which use the symbols +, &lt;, &gt;, or =, such as: True or false? <math>10 + 4 &lt; 14</math> <math>10 + 4 = 14</math> <math>10 + 4 &gt; 14</math></li> </ul>	<ul style="list-style-type: none"> <li>develop their fluency in additive relationships within 10, using a range of activities and games</li> <li>draw on their knowledge of the composition of numbers to complete written equations</li> <li>revisit strategies for addition and subtraction within 10 and apply these to a range of questions, including written equations.</li> </ul>
<b>6</b>	<ul style="list-style-type: none"> <li>continue to use conceptual subitising, especially when using a rekenrek.</li> </ul>		<ul style="list-style-type: none"> <li>apply their knowledge of the composition of numbers, to calculations within 10 and 20.</li> </ul>	<ul style="list-style-type: none"> <li>continue to draw on their knowledge of the relative size of numbers when answering questions using the inequality symbol.</li> </ul>	<ul style="list-style-type: none"> <li>continue to practise recalling additive facts within 20, applying their knowledge of the composition of numbers within 20 and strategies within 10.</li> </ul>

### Mastering Number: Overview of content – Year 2

Strand/ Half-term	Subitising	Cardinality, ordinality and counting	Composition	Comparison	Addition and subtraction/ Number facts
<b>1</b>  <b>Children will:</b>	<ul style="list-style-type: none"> <li>develop conceptual subitising skills as they become more familiar with patterns made by numbers within 10 and understand their composition</li> <li>use perceptual and conceptual subitising when using a rekenrek.</li> </ul>	<ul style="list-style-type: none"> <li>explore the linear number system within 10, looking at a range of representations</li> <li>compare number tracks and number lines and explore the use of 'midpoints' to enable them to identify the location of other numbers.</li> </ul>	<ul style="list-style-type: none"> <li>focus on the composition of numbers within 10, with a particular emphasis on the composition of numbers 6, 7, 8 and 9 as '5 and a bit', as well as exploring the composition of numbers 5 and 6 in-depth</li> <li>explore the composition of odd and even numbers, identifying that even numbers are made of 2s and odd numbers have 'an extra 1' – they will link this to the 'shape' of these numbers.</li> </ul>		<ul style="list-style-type: none"> <li>link their growing understanding of the composition of numbers within 10 to the related additive facts, including adding 2 to an odd or even number</li> <li>practise recalling facts in a variety of ways, including through solving simple picture problems and completing equations with a missing sum or addend,</li> </ul>
<b>2</b>  <b>Children will:</b>	<ul style="list-style-type: none"> <li>continue to practise conceptually subitising numbers they have already explored the composition of.</li> </ul>	<ul style="list-style-type: none"> <li>review the linear number system as they compare numbers.</li> </ul>	<ul style="list-style-type: none"> <li>continue to explore the composition of the numbers 7–9 in-depth, linking this to their understanding of odd and even numbers</li> </ul>	<ul style="list-style-type: none"> <li>compare numbers within 10, linking this to their understanding of the linear number system</li> <li>use the inequality symbols to create expressions, e.g. <math>7 &gt; 2</math>, and use the language of 'greater than' and 'less than'</li> <li>draw on their knowledge of number bonds to answer questions in the form: True or false?</li> </ul>	<ul style="list-style-type: none"> <li>continue to practise recalling additive facts for numbers within 10, using a range of equations, games and picture problems.</li> </ul>



				5 + 3 > 7	
<b>3</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>continue to practise conceptually subitising numbers they have already explored the composition of, including 'teen' numbers when they have reviewed the composition of 11–19.</li> </ul>		<ul style="list-style-type: none"> <li>review the composition of 11 to 19 as 'ten and a bit' and explore ways to represent this.</li> </ul>		<ul style="list-style-type: none"> <li>focus on number bonds within 10 presented in the part-part-whole structure, including identifying a missing 'part' and relating this to subtraction equations</li> <li>review strategies for adding 1 and 2 to odd and even numbers to subtraction facts presented in different ways</li> <li>apply their knowledge of the composition of 11–19 to calculations in which 10 is a part</li> <li>apply their knowledge of composition to facts involving 3 addends.</li> </ul>
<b>4</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>continue to conceptually subitise the numbers 11–19 using a range of representations, which expose the structure of these numbers as 'ten and a bit'.</li> </ul>	<ul style="list-style-type: none"> <li>revisit the structure of the linear number system within 20, making links between the midpoints of 5 and 10, and 15.</li> </ul>	<ul style="list-style-type: none"> <li>review the composition of odd and even numbers, linking this to doubles and near doubles.</li> </ul>	<ul style="list-style-type: none"> <li>continue to compare numbers within 20, including questions which use the symbols +, &lt;, &gt;, or =, such as:  Write the correct symbol:  10 + 4 <input type="text"/> 15  10 + 4 <input type="text"/> 14  10 + 4 <input type="text"/> 13</li> </ul>	<ul style="list-style-type: none"> <li>draw on their knowledge of the linear number system and apply this to calculations involving 1 more and 1 less, and pairs of numbers with a difference of 1</li> <li>use their understanding of the composition of odd and even numbers to find doubles and near doubles</li> <li>apply known facts to calculations involving larger numbers, e.g. 5 + 2, 15 + 2, 25 + 2.</li> </ul>

<b>5</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>revisit previous activities which develop their subitising skills.</li> </ul>	<ul style="list-style-type: none"> <li>review the linear number system to 100, applying their knowledge of midpoints to place numbers on a structured number line – they will identify the multiples of 10 that come before and after a given number.</li> </ul>	<ul style="list-style-type: none"> <li>revisit previous activities which develop their understanding of the composition of numbers within 10 and 20.</li> </ul>	<ul style="list-style-type: none"> <li>reason about equalities and inequalities using equations and answering questions, such as: True or false? <math>5 + 3 = 6 + 2</math> <math>9 + 4 &gt; 9 + 5</math> <math>9 + 6 &lt; 10 + 5</math>  This will help them become fluent in the use of the inequality symbol as well as practising their number bond knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>become fluent in a range of strategies involving calculations within 20, using 'make 10' strategies to add, and subtracting through the tens boundary</li> <li>practise recalling number bonds through a range of activities and games which will encourage them to reason about sums and differences.</li> </ul>
<b>6</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>As above.</li> </ul>		<ul style="list-style-type: none"> <li>As above.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>develop their fluency in additive relationships within 20, using a range of activities and games and revisiting previously taught strategies where necessary.</li> </ul>

### Mastering Number: Overview of content – Year 3 (Manley Park scheme)

Strand/ Half-term	Addition and Subtraction	Multiplication and Division	Fractions
<b>1</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Bridge 10</li> <li>Recognise subtraction as difference</li> <li>Add and subtract two-digit and single-digit numbers</li> <li>Add and subtract two-digit numbers and multiples of ten</li> <li>Add and subtract two-digit and two-digit numbers</li> </ul>		
<b>2</b> <b>Children will:</b>		<ul style="list-style-type: none"> <li>Structure multiplication as representing equal groups</li> <li>Find groups of 2 and commutativity</li> </ul>	

		<ul style="list-style-type: none"> <li>Find groups of 10 and 5, and find factors of 0 and 1</li> <li>Understand commutativity, doubling and halving</li> <li>Use quotitive and partitive division structures</li> </ul>	
<b>3</b> <b>Children will:</b>	<p>Bridge 100</p> <p>Understand the composition of and how to calculate with three-digit numbers</p> <p>Secure mental strategies for calculations to 999</p> <p>Use column addition</p> <p>Use column subtraction</p>		
<b>4</b> <b>Children will:</b>		<ul style="list-style-type: none"> <li>Learn 2, 4 and 8 times tables and the relationship between them</li> <li>Learn 3, 6 and 9 times tables and the relationship between them</li> <li>Learn 7 times table and patterns within/across times tables</li> </ul>	
<b>5</b> <b>Children will:</b>			<ul style="list-style-type: none"> <li>Understand the part-whole relationship</li> <li>Identify, represent and compare unit fractions</li> <li>Identify, represent and compare non-unit fractions</li> <li>Add and subtract within one whole</li> </ul>
<b>6</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Revisit above.</li> </ul>	<ul style="list-style-type: none"> <li>Revisit above.</li> </ul>	<ul style="list-style-type: none"> <li>Revisit above.</li> </ul>

**Mastering Number: Overview of content – Year 4 (Manley Park scheme)**

Strand/ Half-term	Addition and Subtraction	Multiplication and Division	Fractions
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1 <b>Children will:</b>	<ul style="list-style-type: none"> <li>• Bridge 100</li> <li>• Understand the composition of and how to calculate with three-digit numbers</li> <li>• Secure mental strategies for calculations to 999</li> <li>• Use column addition</li> <li>• Use column subtraction</li> <li>•</li> </ul>		
2 <b>Children will:</b>		<ul style="list-style-type: none"> <li>• Learn 2, 4 and 8 times tables and the relationship between them</li> <li>• Learn 3, 6 and 9 times tables and the relationship between them</li> <li>• Learn 7 times table and patterns within/across times tables</li> </ul>	
3 <b>Children will:</b>			<ul style="list-style-type: none"> <li>• Understand the part-whole relationship</li> <li>• Identify, represent and compare unit fractions</li> <li>• Identify, represent and compare non-unit fractions</li> <li>• Add and subtract within one whole</li> </ul>
4 <b>Children will:</b>	<ul style="list-style-type: none"> <li>• Compose and calculate with 1,000 and four-digit numbers</li> <li>• Compose and calculate with tenths</li> <li>• Compose and calculate with hundredths and thousandths</li> <li>• Add and subtract in context of money</li> </ul>		
5 <b>Children will:</b>		<ul style="list-style-type: none"> <li>• Connect multiplication and division and the distributive law</li> <li>• Learn 11 and 12 times tables</li> </ul>	

		<ul style="list-style-type: none"> <li>• Calculate division with remainders</li> <li>• Multiply and divide by 10 or 100</li> <li>• Partition leading to short multiplication</li> <li>• Partition leading to short division</li> </ul>	
<b>6</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>• Revisit above.</li> </ul>	<ul style="list-style-type: none"> <li>• Revisit above.</li> </ul>	<ul style="list-style-type: none"> <li>• Work across one whole with improper fractions and mixed numbers</li> </ul>

### Mastering Number: Overview of content – Year 5 (Manley Park scheme)

Strand/ Half-term	Addition and Subtraction	Multiplication and Division	Fractions
<b>1</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>• Compose and calculate with 1,000 and four-digit numbers</li> <li>• Compose and calculate with tenths</li> <li>• Compose and calculate with hundredths and thousandths</li> <li>• Add and subtract in context of money</li> </ul>		
<b>2</b> <b>Children will:</b>		<ul style="list-style-type: none"> <li>• Connect multiplication and division and the distributive law</li> <li>• Learn 11 and 12 times tables</li> <li>• Calculate division with remainders</li> <li>• Multiply and divide by 10 or 100</li> <li>• Partition leading to short multiplication</li> <li>• Partition leading to short division</li> </ul>	

<b>3</b> <b>Children will:</b>			<ul style="list-style-type: none"> <li>Work across one whole with improper fractions and mixed numbers</li> </ul>
<b>4</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Compose and calculate with multiples of 1000 up to 1000000</li> <li>Count, compare and calculate with negative numbers</li> <li>Learn common structures and the part-part-whole relationship</li> <li>Use equivalence and the compensation property to calculate</li> </ul>		
<b>5</b> <b>Children will:</b>		<ul style="list-style-type: none"> <li>Use equivalence to calculate</li> <li>Multiply and divide decimal fractions by whole numbers</li> <li>Solve multiplication with three factors and volume</li> <li>Use factors, multiples, primes and composite numbers</li> <li>Combine multiplication with addition and subtraction</li> </ul>	
<b>6</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Revisit above.</li> </ul>	<ul style="list-style-type: none"> <li>Revisit above.</li> </ul>	<ul style="list-style-type: none"> <li>Find equivalent fractions and simplify fractions</li> <li>Add and subtract using common denomination</li> </ul>

### Mastering Number: Overview of content – Year 6 (Manley Park scheme)

Strand/ Half-term	Addition and Subtraction	Multiplication and Division	Fractions
<b>1</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Compose and calculate with multiples of 1000 up to 1000000</li> <li>Count, compare and calculate with negative numbers</li> </ul>	<ul style="list-style-type: none"> <li>Use equivalence to calculate</li> <li>Multiply and divide decimal fractions by whole numbers</li> </ul>	

	<ul style="list-style-type: none"> <li>Learn common structures and the part-part-whole relationship</li> <li>Use equivalence and the compensation property to calculate</li> </ul>		
<b>2</b> <b>Children will:</b>		<ul style="list-style-type: none"> <li>Solve multiplication with three factors and volume</li> <li>Use factors, multiples, primes and composite numbers</li> <li>Combine multiplication with addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>Find equivalent fractions and simplify fractions</li> <li>Add and subtract using common denomination</li> </ul>
<b>3</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Compose and calculate with numbers up to 10,000,000</li> <li>Solve problems with two unknowns</li> </ul>	<ul style="list-style-type: none"> <li>Multiply larger numbers using long multiplication</li> <li>Divide by two-digit divisors</li> <li>Use compensation to calculate</li> <li>Combine division with addition and subtraction</li> <li>Secure decimal place-value knowledge</li> <li>Revisit all areas of study from KS2</li> </ul>	<ul style="list-style-type: none"> <li>Multiply and divide fractions by a whole number</li> <li>Link fractions, decimals and percentages</li> <li>Revisit all areas of study from KS2</li> </ul>
<b>4</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Revisit all areas of study from KS2</li> </ul>	<ul style="list-style-type: none"> <li>Find the mean, average and equal shares</li> <li>Find scale factor, ratio and carry out proportional reasoning</li> <li>Solve problems in the multiplicative context of area and perimeter</li> </ul>	<ul style="list-style-type: none"> <li>Revisit all areas of study from KS2</li> </ul>
<b>5</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Revisit all areas of study from KS2</li> <li>Compose and calculate with numbers up to 10,000,000</li> <li>Solve problems with two unknowns</li> </ul>	<ul style="list-style-type: none"> <li>Revisit all areas of study from KS2</li> </ul>	<ul style="list-style-type: none"> <li>Revisit all areas of study from KS2</li> </ul>
<b>6</b> <b>Children will:</b>	<ul style="list-style-type: none"> <li>Revisit all areas of study from Year Six</li> </ul>	<ul style="list-style-type: none"> <li>Revisit all areas of study from Year Six</li> </ul>	<ul style="list-style-type: none"> <li>Revisit all areas of study from Year Six</li> </ul>

**2023/2024 pilot of NCETM/DFE Mastering Number KS2 in Year 4 and Year 5**

**Year 4**

Half-term	Autumn	Spring	Summer
<b>Children will:</b>	<ul style="list-style-type: none"> <li>Represent 'many as 1' using a unitised counter and a 'stamping' gesture</li> <li>Use the 'five and a bit' structure to double, and connect this to recalling products when one of the factors is 2 or 4</li> <li>Practise recalling products when one of the factors is 5 or 10</li> <li>Explore 'square' facts</li> <li>Use the distributive property to explore the x9, x11 and x12 facts</li> <li>Become familiar with the core multiplication facts (CMF) table and practise saying the smaller factor first regardless of the position of the factors</li> </ul>	<ul style="list-style-type: none"> <li>develop automaticity in all the multiplication facts, both those in the Core Multiplication Fact table (CMF) and others within the set of 144 facts.</li> <li>•Recap': quick review of previously learnt facts using the oral pattern as the initial prompt.</li> <li>•Understand': this provides an opportunity for pupils to explore, in more depth, the structure of the 2 focus facts.</li> <li>•Explain': Continue to develop and use good number sense to check answers, e.g. explaining why <math>7 \times 9</math> gives a product that is less than 70 and must be an odd number because at least one of the factors is odd.</li> <li>•say': this provides an opportunity for pupils to practise saying the fact using the oral pattern of factor, factor, product, alongside the representations used.</li> </ul>	<ul style="list-style-type: none"> <li>Connect contexts to writing and interpreting equations and connect multiplication equations and multiplication equations with a missing factor to division.</li> <li>Know that the product in a multiplication equation is equivalent to the dividend in the corresponding division equation.</li> </ul>

**Year 5**

Half-term	Autumn	Spring	Summer
<b>Children will:</b>	<ul style="list-style-type: none"> <li>Ensure familiarity with the CMF table saying the smaller factor first; know products that are square numbers, facts where 1 is a factor and where 10 is a factor.</li> <li>Recap how unitised counters and equations can represent repeated units; recap contexts where 2 is a factor.</li> <li>Make links between multiplication and division equations and know how the numbers are connected.</li> <li>Use a ratio table to explore a scalar relationship when multiplying by 10 and by <math>1/10</math>; 100 and <math>1/100</math></li> <li>Multiply by a unit fraction connecting this to partitive and quotitive division.</li> </ul>	<ul style="list-style-type: none"> <li>Explore contexts where you can use either a multiplication and addition equation or a division equation with a remainder.</li> <li>Understand and use divisibility rules for 4, 8, 3, 6 and 9.</li> <li>continue to understand that division equations can also be written as fractions <math>12 \div 3 = 12/3</math> and notice the relationship between the numerator and the denominator, sorting and classifying improper fractions into those that give a whole number quotient and those that do not.</li> <li>Recap facts in the 7 times table.</li> </ul>	<ul style="list-style-type: none"> <li>Explore multiplicative composition including contexts that give rise to more than 2 factors.</li> <li>Explore the associative and commutative property of multiplication to make calculations more accessible.</li> <li>Consider what changes when you shift from one expression to another for example <math>3 \times 72</math> to <math>3 \times 73</math>, and <math>3 \times 72</math> to <math>4 \times 72</math>, being able to explain what each number represents.</li> <li>Apply scaling by, 10, 100, <math>1/10</math> or <math>1/100</math> to known facts.</li> </ul>



	. Use a ratio table to explore a constant (functional) relationship.		
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