



## Mathematics Curriculum Framework - Following Oak National Academy (Y1-6)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Preschool						
Number	<u>Comparison</u> Compare quantities using language: 'more than', 'fewer than'. <u>Position and Direction</u> Understand position through words alone – for example, "The bag is under the table", - with no pointing; Describe a familiar route.	<u>Cardinality and Counting</u> Say one number for each item in order: 1, 2, 3, 4, 5; Show 'finger numbers' up to 5; Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'); Recite numbers past 5. <u>Position and Direction</u> Discuss routes and locations, using words like 'in front of' and 'behind'.	<u>Cardinality and Counting</u> Recite numbers past 5; Fast recognition of up to 3 objects, without having to count them individually ('subitising'); <u>Shape</u> Talk about and explore 2D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'.	Notice and correct an error in a repeated pattern. <u>Measure</u> Make comparisons between objects relating to size and length	<u>Number recognition</u> Begins to recognise numbers to 5 <u>Cardinality and Counting</u> Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Extend and create ABAB patterns – stick, leaf, stick, leaf; Notice and correct an error in a repeated pattern. <u>Position and Direction</u> Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' <u>Shape</u> Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.	<u>Composition</u> Solve real world mathematical problems with numbers up to 5; Experiment with their own symbols and marks as well as numerals; <u>Number recognition</u> Recognises numbers to 5; <u>Cardinality and Counting</u> Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5; <u>Position and Direction</u> Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' <u>Shape</u> Select shapes appropriately: flat surfaces for building, a bigger triangle, etc. <u>Measure</u> Make comparisons between objects relating to height
Numerical Patterns						
Shape, Space and Measure						



					a triangular prism for a roof, etc; Talk about 3D shapes	
Preschool White Rose Hub	<u>Comparison 1:</u> More than, fewer than, same <u>Shape, space and measure 1:</u> explore and build with shapes and objects <u>Pattern 1:</u> explore repeats <u>Counting 1:</u> hear and say number names <u>Subitising 1:</u> I can see 1, 2, 3	<u>Comparison 2:</u> compare and sort collections <u>Shape, space and measure 2:</u> explore position and space <u>Pattern 2:</u> Join in with repeats <u>Counting 2:</u> begin to order number names <u>Subitising 2:</u> show me 1, 2, 3	<u>Counting 3:</u> move and label 1, 2, 3 <u>Shape, space and measure 3:</u> explore position and routes <u>Pattern 3:</u> explore patterns	<u>Subitising 3:</u> talk about dots <u>Counting 4:</u> take and give 1 2 3 <u>Shape, space and measure 4:</u> match, push and pull	<u>Subitising 4:</u> Make games and actions <u>Counting 5:</u> show me 5 <u>Comparison 3:</u> match, sort, compare <u>Pattern 4:</u> lead on own repeats	<u>Counting 6:</u> stop at 1, 2, 3, 4, 5 <u>Pattern 5:</u> making patterns together <u>Pattern 6:</u> my own pattern <u>Shape, space and measure 5:</u> start to puzzle
Reception Number (Mastery Approach)	<ul style="list-style-type: none"> <li>identify when a set can be subitised and when counting is needed</li> <li>subitise different arrangements, both unstructured and structured, including using the Hungarian number frame</li> <li>make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills</li> <li>spot smaller numbers 'hiding' inside larger numbers</li> <li>connect quantities and numbers to</li> </ul>	<ul style="list-style-type: none"> <li>hear and join in with the counting sequence, and connect this to the 'staircase' pattern, seeing that each number is made of one more than the previous number</li> <li>develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once only and in any order; the need for 1:1</li> </ul>	<ul style="list-style-type: none"> <li>continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals</li> <li>begin to identify missing parts for numbers within 5</li> <li>explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame</li> <li>focus on equal and unequal groups when comparing numbers</li> <li>understand that two equal groups can be called a 'double' and connect this to finger patterns</li> <li>sort odd and even numbers according to their 'shape'</li> <li>continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern</li> <li>order numbers and play track games</li> <li>join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers</li> </ul>	<ul style="list-style-type: none"> <li>continue to develop their counting skills, counting larger sets as well as counting actions and sounds</li> <li>explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame</li> <li>compare quantities and numbers, including sets of objects which have different attributes</li> <li>continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2</li> <li>begin to generalise about 'one more than' and 'one less than' numbers within 10</li> <li>continue to identify when sets can be subitised and when counting is necessary</li> <li>develop conceptual subitising skills including when using a rekenrek</li> </ul>		



	<p>finger patterns and explore different ways of representing numbers on their fingers</p> <p>correspondence; understanding that anything can be counted</p> <ul style="list-style-type: none"><li>• compare sets of objects by matching</li><li>• begin to develop the language of 'whole' when talking about objects which have parts</li></ul>					
Reception  Numerical Patterns  Shape, Space and Measure	<p>Begin counting beyond 10; Use of number tracks, calendars and number grids so children can become familiar with number patterns; Continue, copy and create repeating patterns; Make patterns with varying rules (including AB, ABB and ABC) and objects and invite children to continue the pattern.</p>	<p>Understand the 'one more than/one less than' relationship between consecutive numbers; Counting beyond 10; Begin to compare length, weight and capacity.</p>	<p>Automatically recall number bonds for numbers 0–5; Understand the 'one more than/one less than' relationship between consecutive numbers; Begin counting to 20; Select, rotate and manipulate shapes to begin to develop spatial reasoning skills</p>	<p>Automatically recall number bonds for numbers 0–5 and some to 10; Counting to 20; Select shapes for a purpose; Rotate and manipulate shapes to begin to develop spatial reasoning skills</p>	<p>Explore the composition of numbers to 10; Recall number bonds, some to 10; Counting to 20; Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</p>	<p>Counting beyond 20; Explore number; comparisons and patterns; Select, rotate and manipulate shapes to develop spatial reasoning skills; Find 2D shapes within 3D shapes; Compare length, weight and capacity.</p>
Reception  Topic Overviews and MTP breakdown	<p>Subitising Arrangements of numbers Counting skills Seeing smaller numbers within larger ones Compare objects by matching Compare size, mass and capacity Create simple patterns Identify simple shapes</p>	<p>Subitising Explore structure of numbers Focus on equal and unequal groups of numbers Doubling Continue to develop skill of counting Ordering numbers Begin to count past 20 Identify and use shapes 3D shapes and properties</p>	<p>Develop counting skills further A range of representations using 10s frames Compare quantities and numbers One more and one less Identify which sets can be subitised 2D and 3D shapes Copy and continue patterns Length and height Mapping Instructions for positions</p>			



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Counting, recognising and comparing numbers 0 to 10; Counting to and from 20; Counting in 10s – decade numbers; Pattern in counting from 20 to 100;	Comparing quantities; Composition of numbers 0 – 5; 2D and 3D shapes;	2D and 3D shapes; Composition of numbers 6 to 10; Additive Structures: addition;	Additive Structures: Addition and Subtraction; Addition and Subtraction facts within 10	Addition and Subtraction facts within 10; Composition of numbers 11 to 19; Numbers 0 to 20 in different contexts; Unitising and coin recognition – counting in 2s, 5s and 10s	Unitising and coin recognition – counting in 2s, 5s and 10s; Solving problems in a range of contexts; Position and direction including fractions of turns; Time – sequencing events and telling time to the hour and half hour.
Year 2	Composition of multiples of 10; Counting and representing the numbers 20 to 99; Comparing, ordering and partitioning 2-digit numbers; Secure fluency of addition and subtraction facts within 10; 2D and 3D shapes	Calculating within 20; Adding and subtracting ones and tens to and from 2-digit numbers; Grouping objects in different ways and relating to multiplication; Money: Recognise coins and use £ and p	Adding and subtracting ones and tens to and from 2-digit numbers; Grouping objects in different ways and relating to multiplication; Money	Representing counting in 2s, 5s and 10s as the 2, 5 and 10 times tables; Time: Write and tell time to five minutes	Multiplying by 2, doubling and halving (factors and products); Introduction to division structures Addition and subtraction of two 2-digit numbers; Position and direction.	Addition and subtraction of two 2-digit numbers Doubling, halving, quotative and partitive division; Measure – capacity, volume and Mass
Year 3	Adding and Subtracting Across 10; Securing Place Value to 100; Bridging 100; Measuring Length and Recording in Tables	Representing 3-digit Numbers; Measures: Mass & Capacity; Right Angles	Adding and Subtracting two 3-digit numbers; Understand additive relationships; Column Addition	Column Addition; 2,4,8 Times Table	Column Subtraction; Unit Fractions; Identify Parts of a Whole; Compare & Order Unit Fractions; Fractions as Operations; Non-Unit Fractions	Composition of Non-Unit Fractions; Parallel and Perpendicular sides in Polygons; Tell the time/Units of Time
Year 4	Addition and Subtraction; Place Value to 1000; Calculation and conversion of measures;	Counting threes and sixes as 3 and 6 times tables and tests of divisibility; 9 times tables;	7 times tables; Multiplicative structures; Distributive law; 2D and 3D shapes and symmetry	Multiply and divide by 10 and 100; Time – analogue and digital; 12 and 24 hour clocks	Co-ordinates; fractions; fractions greater than 1; mixed numbers; add and subtract	Converting fractions; add and subtract mixed numbers; Calculating with money; division with remainders



	comparing and rounding 4-digit numbers; Perimeter	3 and 9 times tables			fractions and mixed numbers	
Year 5	Understand tenths as part of a whole; Compose and calculate with decimals including column addition and subtraction; Understand hundredths as parts of a whole; Use knowledge of decimals to solve problems in different contexts: lengths; Negative numbers	Multiplication by partitioning leading to short multiplication (2 digit by 1 digit) then (3 digit by 1 digit); Division by partitioning leading to short division (2 and 3 digit by 1 digit)	Understand the concept of area; Link area to rectangles and multiplication; Compare and describe measurements using knowledge of multiplication and division; Understand the concept of volume	Calculating with decimal fractions; Multiply 3 or more numbers (commutative and associative laws); Factorisation (square and prime numbers)	Use common factors and multiples to solve calculations efficiently; Multiply a proper fraction by a whole number; Multiply improper fractions and mixed numbers by a whole number; Find unit and non-unit fractions of whole numbers	Comparing fractions using equivalence and decimals; Converting units; Angles
Year 6	Use knowledge of part-part-whole; Use equivalence and compensation; Multiples of 1000; Place value up to 7 digits	Order and compare numbers up to 8-digits; Solve problems up to 7 digits; Multiply and divide by 2 digits	Draw and compose shapes; Area, Perimeter, position and direction; Addition and subtraction of fractions	Comparing fractions; multiplying and dividing fractions; understanding percentages;	Statistics; averages; order of operations; Subtraction problems	Subtraction problems; using equivalence to calculate; ratio and proportion; addition and subtraction; solving problems with two unknowns