

# **Christ the King Catholic Primary School**



## **Maths Overviews 2023-24**



## CTK White Rose Maths Overviews 23-24

### FS1

Autumn	Spring	Summer
<ul style="list-style-type: none"><li>● Know number names to five, initially.</li><li>● Show 'finger numbers' up to 5.</li><li>● To tag each object with a number name when counting in the correct order - 1,2,3,4,5.</li><li>● Practice counting backwards through rhymes</li><li>● Compare quantities using language: 'more than', 'fewer than'.</li><li>● Fast recognition of up to 3 objects, without having to count them individually ('subitising').</li><li>● Identify smaller numbers within a number through number talk</li><li>● Continuing and copying an AB pattern</li><li>● Spatial Awareness - Experience different viewpoints e.g. construction, tangrams, making pictures with shapes.</li><li>● To compare amounts of continuous quantities (length, capacity, weight), pointing to items that are big, tall, full or heavy.</li></ul>	<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>● Identify groups with the same number of things - beginning to understand equal</li><li>● Exploration of all the ways to make 5</li><li>● Solve real world mathematical problems with numbers up to 5.</li><li>● Experiment with their own symbols and marks as well as numerals.</li><li>● Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.</li><li>● Make their own AB pattern</li><li>● Understand position through words alone – for example, "The bag is under the table," – with no pointing.</li><li>● To use language of position and direction position: 'in', 'on', 'under' direction: 'up', 'down', 'across'</li><li>● To use language of viewpoint: 'in front of', 'behind', 'forwards', 'backwards' ('left' and 'right' to be used later on as ideas develop).</li><li>● Describe a familiar route.</li><li>● Discuss routes and locations, using words like 'in front of' and 'behind'.</li><li>● Begin to use more specific terms, such as 'taller than', 'heavier than', 'lighter than', and 'holds more than', as well as more general comparative phrases, such as 'not enough', 'too much', and 'a lot more'.</li></ul>	<ul style="list-style-type: none"><li>● Link numerals and amounts: for example, showing the right number of objects to match the numeral</li><li>● Explore partitioning numbers into small groups and recombining them e.g five currant buns</li><li>● Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.</li><li>● Combine shapes to make new ones - an arch, a bigger triangle etc.</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>● Notice and correct an error in a repeating AB pattern</li><li>● Identifying the unit of repeat in an AB pattern</li><li>● Begin to represent spatial relationships - to describe things being 'in front of', 'behind', 'on top of' etc</li><li>● To design and follow simple maps.</li><li>● Make direct comparisons between objects relating to size, length, weight and capacity.</li><li>● Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'</li></ul>



## CTK White Rose Maths Overviews 23-24

### FS2

	Mastering Number	White Rose
<b>Autumn</b>	<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 finger patterns and explore different ways of representing numbers on their fingers</li> <li>• hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number</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 and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds</li> <li>• compare sets of objects by matching</li> <li>• 1 more and 1 less</li> <li>• begin to develop the language of 'whole' when talking about objects which have parts</li> </ul>	<ul style="list-style-type: none"> <li>• Making patterns</li> <li>• Circles and triangles</li> <li>• Shapes with 4 sides</li> <li>• Combining shapes</li> <li>• Routines, day and night, times of day and routines</li> </ul>
<b>Spring</b>	<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>• Comparing size, length, mass, capacity</li> <li>• Time</li> <li>• 3D shapes</li> <li>• Combining amounts</li> <li>• Bonds to 10</li> </ul>
<b>Summer</b>	<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>	<ul style="list-style-type: none"> <li>• Adding more</li> <li>• Taking away</li> <li>• Sharing and grouping</li> <li>• Odds and evens</li> <li>• Spatial reasoning</li> <li>• Patterning</li> <li>• Revisiting comparing size, length, mass and capacity</li> </ul>



## CTK White Rose Maths Overviews 23-24

### Year 1

#### Based upon White Rose units

	Wk 1	2	3	4	5	6	7	8	9	10	11
<b>Autumn</b>	Place value within 10				Addition and subtraction within 10					Shape and pattern	
<b>Spring</b>	Place value within 20			Addition and subtraction within 20			Place value within 50 (including numberlines)		Measurement (including scales)		
<b>Summer</b>	Place value within 100			Multiplication and division		Money and addition and subtraction		Fractions	Position and direction	Time	consolidation

#### Additional Fluency Lessons from Mastering Number

<b>Autumn</b>	<ul style="list-style-type: none"> <li>• Subitising, introduction to the Rekenrek</li> <li>• Composition of numbers within 10 with a particular focus of '5 and a bit' and numbers that are 1 or 2 more or less than a number</li> <li>• Composition of even numbers</li> <li>• Numberlines</li> <li>• Number bond to and within 10 work</li> </ul>
<b>Spring</b>	<ul style="list-style-type: none"> <li>• Composition of numbers, even and odd parts, linking to 2 more/less being the next even/odd number</li> <li>• Explore the aggregation and partitioning structures of addition and subtraction through systematically partitioning and re-combining numbers within 10 and connecting this to the part-part-whole diagram, including using the language of parts and wholes</li> <li>• Explore the augmentation and reduction structures of addition and reduction using number stories, including introducing the 'first, then, now' language structure</li> </ul>
<b>Summer</b>	<ul style="list-style-type: none"> <li>• Review of teen numbers as '10 and a bit' and compare numbers within 20, position on a numberline and identify midpoints</li> <li>• Linking addition and subtraction equations with structures of addition and subtraction (aggregation/ partitioning/ augmentation/ reduction)</li> <li>• Practise retrieving previously taught facts and reason about these</li> </ul>



## CTK White Rose Maths Overviews 23-24

### Year 2

#### Based upon White Rose units

	Wk 1	2	3	4	5	6	7	8	9	10	11
<b>Autumn</b>	Place value within 100 (including tens and ones flexible partitioning, numberlines, writing numbers in words, and counting in 2s, 5s and 10s)				Addition and subtraction part 1 (mental and written methods -but not column)			Multiplication and division (arrays, equal grouping and sharing, counting in multiples of 2s, 5s, 10s)		Money (pounds and pence) Add in extra opportunities for word problems	
<b>Spring</b>	Addition and subtraction part 2		Multiplication and division part 2 ( Introduce $\times$ sign, introduce counting in 3s)		Fractions Intro to halves, quarters and thirds		Time (to nearest 5 minutes, quarter past and to – link to x5, half and quarter)	Length and height (cm and <b>include addition and subtraction</b> related problems)	Temperature, Capacity and Mass (including scales in 2s, 5s, 10s to recap x2 x5 x10 and addition and subtraction word probs)		
<b>Summer</b>	Shape (2D and 3D, faces, vertices and edges, symmetry))		Position and direction		Addition and subtraction – add in unit	Statistics (application of counting in 2s, 5s and 10s tallies and pictograms)		Multiplication and division part 3 Add in review work and to help with fractions of amount	Fractions (wholes, halves, quarters, thirds, fractions of amounts)		Consolidation of operations

#### Additional Fluency Lessons from Mastering Number (also ongoing practise of 2s, 10s and 5s)

<b>Autumn</b>	<ul style="list-style-type: none"> <li>Review the composition of numbers as '5 and a bit' , even/odd</li> <li>Consolidate understanding of the numbers 10 and 20 as '10 and a bit' and reason about midpoints on numberlines</li> </ul>
<b>Spring</b>	<ul style="list-style-type: none"> <li>Review of doubles using the '5 and a bit' and '10 and a bit' structure; use doubles to calculate near doubles</li> <li>Use bonds of 10 to reason about bonds of 20, in which the given addend is greater than 10</li> <li>Use knowledge of bonds of 10 to find three addends that sum to 10</li> <li>Use knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary</li> <li>Position multiples of 10 on a 0 - 100 number line and reason about midpoints</li> </ul>
<b>Summer</b>	<ul style="list-style-type: none"> <li>Subtract across the 10-boundary</li> <li>Review bonds of 20 in which the given addend is greater than 10, and reason about bonds of 20, in which the given addend is less than 10</li> <li>Review doubles and near doubles and transform additions in which two addends are adjacent odd/ even numbers into doubles</li> <li>Consolidation of facts</li> </ul>



## CTK White Rose Maths Overviews 23-24

### Year 3

#### Based upon White Rose units

	Wk 1	2	3	4	5	6	7	8	9	10	11	
<b>Autumn</b>	Place value within 100 (including HTO, flexible partitioning, numberlines, writing numbers in words)			Addition and subtraction (mental and written methods, including of numbers with different numbers of digits and with exchange and missing digit qu)				Money (pounds and pence and giving change)		Multiplication and division A (2s, 5s, 10s, 3s, 4s, 8s,)		
<b>Spring</b>	Multiplication and division A contd			Length and Perimeter (mm, cm and m and opportunities to review addition)			Multiplication and division B (short division and multiplication, remainders)			Fractions (unit and non-unit fractions, fractions of a number)		
<b>Summer</b>	Fractions (Equivalent fractions, comparing and ordering, adding and subtracting)			Time (time to the minute, conversions, am and pm, durations)			Geometry (2D, 3D, turns and angles, horizontal and perpendicular)		Mass and Capacity (measuring, comparing, calculating)		Statistics (pictograms and bar charts)	

#### Additional Fluency/Arithmetic Lessons

<b>Autumn</b>	<ul style="list-style-type: none"> <li>Consolidate and gain automaticity in:</li> <li>2,s 5s, 10s, 3s and 4s</li> <li>Inverse relationships of addition and subtraction</li> <li>Number bonds to 20, complements of 100</li> <li>Column methods of addition and subtraction including with exchange</li> </ul>
<b>Spring</b>	<ul style="list-style-type: none"> <li>Developing fluency in 4s and links with 8s</li> <li>Practise using two digit by 1 digit short multiplication method</li> <li>Practise in using bus stop division</li> </ul>
<b>Summer</b>	<ul style="list-style-type: none"> <li>Consolidation of in short multiplication and division methods</li> <li>Consolidation of column methods of addition and subtraction including with exchange</li> <li>Consolidation of 2s, 3s, 4s, 5s, 8s, 10s</li> </ul>



## CTK White Rose Maths Overviews 23-24

### Year 4

#### Based upon White Rose units

	Wk 1	2	3	4	5	6	7	8	9	10	11	
<b>Autumn</b>	Place value within 10,000 (including flexible partitioning, numberlines, rounding)				Addition and subtraction (mental and written methods, including of numbers with different numbers of digits (up to 4 digits) and with exchange and missing digit qu)			Multiplication and Division A (3s, 6s, 9s, , multiplying by 1 and 0)			Area (Reinforce link to multiplication arrays)	
<b>Spring</b>	Multiplication and division B (short division and multiplication to 3 places by 1, remainders, multiplying and dividing by 10 and 100)  7s, 11s, 12s in extra lesson		Fractions (unit and non-unit fractions, equivalent fractions, improper, addition and subtraction with same denominator and from wholes, <b>**fractions of amounts – add this into unit **</b> )				Geometry (properties, names, symmetry)		Perimeter (mm, cm, m and km, equivalent lengths, measuring perimeter, calculating perimeter of regular and rectilinear shapes and polygons)		Decimals A (tenths and hundredths, dividing by 10 and 100)	
<b>Summer</b>	Decimals A and B (making wholes, comparing, ordering and rounding, equivalent to half and quarter)				Money (calculations)	Multiplication and division (Additional practice for MTC and application to problem solving)		Time (time to the minute. 24 hour clock, concerting durations of time, analogue to digital)		Position and Direction (Describe position, draw on a grid, translations, describe movements)	Statistics (line graphs)	

#### Additional Fluency/ Arithmetic Lessons

<b>Autumn</b>	<ul style="list-style-type: none"> <li>Review 2s, 3s, 4s, 5s, 8s, 10s from y3</li> <li>Introduce 6s , 9s and square numbers</li> </ul>
<b>Spring</b>	<ul style="list-style-type: none"> <li>Review all from Autumn and Intro 7s</li> <li>Multiplying and dividing by 10 and 100</li> <li>Ongoing review , Intro 11s and 12s</li> </ul>
<b>Summer</b>	<ul style="list-style-type: none"> <li>Fluency in all multiplication facts with targeted teaching for MTC</li> <li>Accuracy in bus stop division and short multiplication methods.</li> <li>Ongoing practise of multiplying and dividing by 10 and 100</li> </ul>



## CTK White Rose Maths Overviews 23-24

### Year 5

#### Based upon White Rose units

	Wk 1	2	3	4	5	6	7	8	9	10	11
<b>Autumn</b>	<b>Place value and Negative Numbers</b> (including flexible partitioning, numberlines, rounding and powers of 10, <b>negative numbers</b> )			<b>Addition and subtraction</b> (mental and written methods, including whole and decimal numbers with different numbers of digits (up to 4 digits with exchange), multi step problems and missing numbers)		<b>Multiplication and Division</b> (multiples, factors, squares, primes, cubes, powers of 10)			<b>Fractions</b> (equivalent, adding and subtracting, mixed and improper, comparing and ordering, adding and subtracting from mixed numbers)		
<b>Spring</b>	<b>Multiplication and division</b> (short division and multiplication to 3 places by 1, remainders, multiplying and dividing by 10 and 100)		<b>Fractions</b> (Multiplying by integers, fractions of a quantity)				<b>Decimals and Percentages</b> (decimal place value review, thousandths, comparing, ordering and rounding, calculations with decimals, decimal sequences introducing percentages, FDP equivalences)			<b>Perimeter and Area</b> (perimeter, area of compound shapes and irregular shapes)	
<b>Summer</b>	<b>Decimal Calculations</b>		<b>Geometry Shape</b> (angles, protractor, calculating angles, calculating lengths and angles, regular and irregular polygons, 3D shapes)		<b>Position and Direction</b> (first quadrant, coordinates, translations with coordinates, symmetry, reflection, reflection with coordinates)		<b>Measure</b> (converting units of length, weight and time, including decimals and powers of ten)	<b>Volume</b>		<b>Statistics</b> (lines graphs, tables and timetables)	

#### Additional Fluency/Arithmetic Lessons

<b>Autumn</b>	<ul style="list-style-type: none"> <li>Ongoing practice of multiplication and division facts</li> <li>Fluency in Multiplying and dividing by 10 and 100</li> <li>Decimal number bonds and place value</li> </ul>
<b>Spring</b>	<ul style="list-style-type: none"> <li>Fluency in Multiplying and dividing by 10 and 100, including with decimals</li> <li>Calculations with decimals including of different number of digits</li> <li>Multiplication facts ongoing practise</li> </ul>
<b>Summer</b>	<ul style="list-style-type: none"> <li>FDP consolidation</li> <li>Multiplication facts</li> </ul>



## CTK White Rose Maths Overviews 23-24

### Year 6

#### Based upon White Rose units

	Wk 1	2	3	4	5	6	7	8	9	10	11
<b>Autumn</b>	Place value to 8 digit numbers (including flexible partitioning, numberlines, rounding and powers of 10, negative numbers)		Decimal PV review (3dp, powers of 10)	Calculations – 4 operations (mental and written methods, including whole and decimal numbers with different numbers of digits (up to 5 digits with exchange), multi step problems and missing numbers; factors, multiples, divisibility rules, primes, squares, cubes, division by 2 digits, order of operations)				Decimal calculation $X \div$ Converting measures	Fractions A (equivalent and simplifying, adding and subtracting including different denominators, mixed and improper, comparing and ordering, adding and subtracting mixed numbers)		
<b>Spring</b>	Fractions A and B (Multiplying and dividing by integers and fractions, fractions of amounts and finding the whole)			Fractions, Decimals and Percentages (FDP conversions, percentages of an amount, percentages missing values)				Statistics Pie charts with percentages  Mean	Ratio (Ratio language, link to fractions, calculating, scale factors, ratio and proportion problems)	Algebra (finding rules, forming expressions, substitution, formulae, pairs of values)	
<b>Summer</b>	Geometry Quadrilaterals, triangles, circles, Protractor, calculating angles in triangles, around a point, vertically opposite, quadrilaterals, drawing shapes accurately, 3d shapes and nets)	Position and Direction (first quadrant, coordinates, translations with coordinates, symmetry, reflection, reflection with coordinates)	Measurement and Area (area and perimeter review, area of triangles and parallelograms, volume review) Add in scale drawings	SATS	Post –SATS projects and consolidation work						

#### Additional Fluency/Arithmetic Lessons

<b>Autumn</b>	<ul style="list-style-type: none"> <li>Ongoing practice of multiplication and division facts and related facts</li> <li>Fluency in Multiplying and dividing by 10 and 100 and 1000 including decimals</li> <li>4 operations review</li> </ul>
<b>Spring</b>	<ul style="list-style-type: none"> <li>FDP calculations as needed</li> </ul>
<b>Summer</b>	<ul style="list-style-type: none"> <li>Targeted needs</li> </ul>



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