



'Life in all its fullness'
John 10:10

Christ Church C.E.(VC) Primary School

Maths Long Term Plan 2022/23/24

Maths at Christ Church School

We believe that a high-quality mathematics curriculum is essential in order for children to develop the maths skills and knowledge that they will need throughout their lives. We want children to develop a love of maths, confidently solving problems and sharing their knowledge. At Christ Church School, we follow the White Rose Maths scheme of work, structured in a way that meets the needs of our children in our mixed-ages classes – please see the long-term plan for an overview of how we achieve this.

In their maths learning, we want children to develop:

- **fluency** in the fundamentals of mathematics - the ability to rapidly recall number facts and understand mathematical concepts and to be able to apply their knowledge to a range of increasingly complex problems.
- **reasoning skills** - to use their mathematical knowledge and prior experiences to follow a line of enquiry, apply logical and critical thinking, make connections and find solutions. Crucially they will be able to explain their thought process and justify their conclusions.
- **problem solving** skills, including using trial and error and being able to work systematically to solve problems.

Concrete-Pictorial-Abstract



We use the Concrete-Pictorial-Abstract (CPA) approach which is a system of learning that uses physical and visual aids to build understanding of abstract topics. We use this approach from reception right through to year 6.

Concrete: New mathematical concepts are introduced through the use of **concrete** resources (e.g. Numicon, Diennes blocks, counters etc).that they can manipulate.

Pictorial: Next the children use pictorial representations to solve problems - sometimes these are pictures of the concrete objects they were using, as well as other pictorial representations such as diagrams or number lines.

Abstract: Finally children solve problems where they only have the abstract; numbers or other symbols.




















Building these steps across a lesson or unit of work can help children, from reception through to year 6, to secure their understanding of new mathematical concepts and make links between concepts.



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1	Autumn	Spring	Summer
Reception	 <p>Number</p> <ul style="list-style-type: none"> Match and sort Compare amounts Representing 1,2,3 Comparing 1,2,3 Composition 1,2,3 Representing numbers to 5 One more one less <p>Measure, shape and spatial thinking</p>  <ul style="list-style-type: none"> Compare size, mass and capacity Time  <ul style="list-style-type: none"> Exploring pattern Circles and triangles Positional language Shapes with 4 sides 	 <p>Number</p> <ul style="list-style-type: none"> introducing zero comparing numbers to 5 composition of 4 and 5 6,7,8, Making pairs Combining 2 groups 9 and 10 Comparing numbers to 10 Bonds to 10 <p>Measure, shape and spatial thinking</p>  <ul style="list-style-type: none"> Compare mass Compare capacity Length and height Time  <ul style="list-style-type: none"> 3D shape pattern 	 <p>Number</p> <ul style="list-style-type: none"> Building numbers beyond 10 Counting patterns beyond 10 Adding more Taking away Doubling Sharing and grouping Even and odd Deepening understanding Patterns and relationships  <p>Spatial reasoning</p>  <ul style="list-style-type: none"> Spatial reasoning Match rotate manipulate Compose and decompose Visualise Mapping
Year 1	 <p>Number</p> <ul style="list-style-type: none"> Place Value (<i>within 20</i>) Addition & subtraction (<i>within 20 including recognising money</i>) Place value & multiplication (<i>within 50</i>) (<i>Count in 2s, 5s and 10s</i>) 	 <p>Number</p> <ul style="list-style-type: none"> Division & consolidation (<i>equal groups</i>) Place Value (<i>within 100</i>) <p>Measurement</p>  <p>Length and height (<i>compare</i>)</p> <p>Geometry</p>  <ul style="list-style-type: none"> Shape & consolidation (<i>2D and 3D</i>) <p>Number</p>  <ul style="list-style-type: none"> Fractions & consolidation(<i>halves, quarters</i>) 	 <p>Geometry</p> <ul style="list-style-type: none"> Position and direction  <p>Measurement</p> <ul style="list-style-type: none"> Time (<i>o'clock, half past</i>)  <p>Problem solving and efficient methods</p>  <p>Measurement</p> <ul style="list-style-type: none"> Weight and volume  <p>Consolidation and investigations</p>



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2	Autumn		Spring		Summer	
Year 1		<p>Number</p> <ul style="list-style-type: none"> Place Value (<i>within 20</i>) Addition and subtraction (<i>within 20 including recognising money</i>) Place value & multiplication (<i>within 50</i>) (<i>Count in 2s, 5s and 10s</i>) 		<p>Number</p> <ul style="list-style-type: none"> Division & consolidation (<i>equal groups</i>) Place Value (<i>within 100</i>) <p>Measurement</p> <p>Length and height (<i>compare</i>)</p> <p>Geometry</p> <ul style="list-style-type: none"> Shape & consolidation (<i>2D and 3D</i>) <p>Number</p> <ul style="list-style-type: none"> Fractions & consolidation (<i>halves, quarters</i>) 	    	<p>Geometry</p> <ul style="list-style-type: none"> Position and direction <p>Measurement</p> <ul style="list-style-type: none"> Time (<i>o'clock, half past</i>) <p>Problem solving and efficient methods</p> <p>Measurement</p> <ul style="list-style-type: none"> Weight and volume <p>Consolidation and investigations</p>
	Year 2		<p>Number</p> <ul style="list-style-type: none"> Place Value (<i>Numbers to 100</i>) Addition and subtraction (<i>within 100 including money</i>) Multiplication (<i>Count in 2s, 5s and 10s and 3s</i>) (<i>2, 5 and 10 times tables</i>) 		<p>Number</p> <ul style="list-style-type: none"> Division (<i>divide by 2, 5 and 10</i>) Statistics (<i>tally, block, pictogram</i>) <p>Measurement</p> <p>Length and height (<i>cm and m</i>)</p> <p>Geometry</p> <ul style="list-style-type: none"> Properties of shape (<i>2D and 3D, sides, faces, vertices and symmetry</i>) <p>Number</p> <ul style="list-style-type: none"> Fractions (<i>halves, quarters, thirds</i>) 	    



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3	Autumn		Spring		Summer	
Year 2		<p>Number</p> <ul style="list-style-type: none"> Place Value (<i>Numbers to 100</i>) Addition and subtraction (<i>within 100 including money</i>) Multiplication (<i>Count in 2s, 5s and 10s and 3s</i>) (2, 5 and 10 times tables) 	  	<p>Number</p> <ul style="list-style-type: none"> Division (<i>divide by 2, 5 and 10</i>) Statistics (<i>tally, block, pictogram</i>) <p>Measurement</p> <p>Length and height (<i>cm and m</i>)</p> <p>Geometry</p> <ul style="list-style-type: none"> Shape, position and direction (<i>2D and 3D, sides, faces, vertices and symmetry</i>) <p>Number</p> <ul style="list-style-type: none"> Fractions and consolidation (<i>halves, quarters, thirds</i>) 	   	<p>Measurement</p> <ul style="list-style-type: none"> Time (<i>o'clock, half past, quarter past/to</i>) <p>Problem solving and efficient methods</p> <p>Measurement</p> <ul style="list-style-type: none"> Mass, capacity and temperature (<i>kg, g, l, ml</i>) <p>Consolidation and investigations</p>
	Year 3		<p>Number</p> <ul style="list-style-type: none"> Place Value (<i>within 1000</i>) Addition and subtraction (<i>within 1000 including money</i>) Multiplication (<i>3, 4 and 5 times table</i>) (2 digit x 1 digit) 	  	<p>Number</p> <ul style="list-style-type: none"> Division (<i>2 digit divide by 1 digit</i>) Statistics (<i>pictogram, bar, table</i>) <p>Measurement</p> <p>Length and height (<i>m, cm, mm</i>)</p> <p>Geometry</p> <ul style="list-style-type: none"> Shape and perimeter (<i>perimeter, angles</i>) <p>Number</p> <ul style="list-style-type: none"> Fractions (<i>half, quarter, third of an amount, tenths, equivalence</i>) 	   



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4	Autumn	Spring	Summer
Year 4	 <p>Number</p> <ul style="list-style-type: none"> Place Value (<i>numbers to 10,000</i>) Addition and subtraction (<i>4 digits</i>) Multiplication and division (<i>6, 7, 9, 11, 12 times tables</i>) (<i>multiply / divide by 10, 100</i>)  <p>Measurement</p> <ul style="list-style-type: none"> Length, perimeter and area 	 <p>Number</p> <ul style="list-style-type: none"> Multiplication and division (<i>2 digit by 1 digit / 3 digit by 1 digit</i>) Fractions (<i>equivalence, add and subtract, count in fractions</i>) Decimals (<i>tenths and hundredths</i>) 	 <p>Number</p> <ul style="list-style-type: none"> Decimals (<i>tenths and hundredths, including money</i>)  <p>Measurement</p> <ul style="list-style-type: none"> Time (<i>hours, minutes, seconds</i>)  <p>Number</p> <ul style="list-style-type: none"> Statistics (<i>line graphs</i>)  <p>Geometry</p> <ul style="list-style-type: none"> Properties of shape (<i>angles, symmetry</i>) Position and direction  <p>Consolidation</p>
	 <p>Number</p> <ul style="list-style-type: none"> Place Value (<i>numbers to 100,000</i>) Addition and subtraction (<i>+4 digits, multi-step</i>) Multiplication and division (<i>prime, squared, cubed numbers</i>) (<i>multiply / divide by 10, 100, 1000</i>)  <p>Measurement</p> <ul style="list-style-type: none"> Length, perimeter and area (<i>compound, irregular shapes</i>) 	 <p>Number</p> <ul style="list-style-type: none"> Multiplication and division (<i>4 digit by 1 digit / 2 digit by 2 digit, remainders</i>) Fractions (<i>equivalence, mixed numbers, add and subtract, multiply by an integer</i>) Percentages and decimals (<i>decimals/percentages/fractions</i>) (<i>tenths, hundredths, thousandths</i>) 	 <p>Number</p> <ul style="list-style-type: none"> Decimals (<i>add / subtract, sequences</i>)  <p>Measurement</p> <ul style="list-style-type: none"> Time (<i>analogue to digital, timetables</i>)  <p>Number</p> <ul style="list-style-type: none"> Statistics (<i>line graphs and tables</i>)  <p>Geometry</p> <ul style="list-style-type: none"> Properties of shape (<i>degrees, reasoning</i>) Position and direction  <p>Measurement</p> <ul style="list-style-type: none"> Converting units and volume (<i>metric, imperial</i>)  <p>Consolidation</p>



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5	Autumn		Spring		Summer	
Year 5		Number <ul style="list-style-type: none"> Place Value (<i>numbers to 100,000</i>) Addition and subtraction (<i>+4 digits, multi-step</i>) Multiplication and division (<i>prime, squared, cubed numbers</i>) (<i>multiply / divide by 10, 100, 1000</i>) Fractions (<i>equivalence, mixed numbers, add and subtract, multiply by an integer</i>) 	  	Number <ul style="list-style-type: none"> Fractions (<i>continued</i>) Decimals and percentages (<i>decimals/percentages/fractions</i>) (<i>tenths, hundredths, thousandths</i>) Decimals (<i>add / subtract, sequences</i>) 	 	Geometry <ul style="list-style-type: none"> Properties of shape (<i>degrees, reasoning</i>) Position and direction
		Measurement <ul style="list-style-type: none"> Converting units and volume (<i>metric, imperial</i>) Perimeter, area and volume (<i>compound, irregular shapes, capacity</i>) 		Number <ul style="list-style-type: none"> Statistics (<i>line graphs and tables</i>) 		Investigations and consolidation
Year 6		Number <ul style="list-style-type: none"> Place Value (<i>numbers to 1 million</i>) Four operations (<i>multiply 3 digits by 2 digits, 4 digits by 2 digits, long and short division</i>) Fractions (<i>equivalence, compare, 4 operations</i>) 	  	Number <ul style="list-style-type: none"> Ratio Decimals and percentages (<i>decimals/percentages/fractions</i>) (<i>tenths, hundredths, thousandths</i>) Algebra (<i>expressions, formulae</i>) 	 	Geometry <ul style="list-style-type: none"> Properties of shape (<i>calculate angles, nets</i>) Position and direction
		Measurement <ul style="list-style-type: none"> Converting units (<i>metric, imperial</i>) Perimeter, area and volume (<i>area of a triangle</i>) 		Number <ul style="list-style-type: none"> Statistics (<i>pie charts, mean</i>) 		Investigations and consolidation