

Westleigh Methodist Primary School – Mathematics Curriculum Overview

With God, all things are possible – Matthew 19:26 Love Teamwork Thankfulness Generosity Peace Forgiveness Equality Justice



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	 Getting to know you WK1-3 Opportunities for settling in, introducing the areas of provision and getting to know the children. Key times of day, class routines. Exploring the continuous provision inside and out. Where do th&ings belong? Positional language. Just like me WK4-6 Match and sort. Compare amounts. Compare size, mass and capacity. 	It's me 1, 2, 3 WK7-9Representing 1,2,3Comparing 1,2,3Composition 1,2,3Circles and trianglesPositional languageLight & dark WK10-12Representing numbers to 5One more and one lessShapes with 4 sidesTime	Alive in 5 WK 1-3 Introducing zero Comparing numbers to 5 Composition of 4 & 5 Comparing mass (2) Comparing capacity (2) Growing 6,7,8 WK4-6 6,7 & 8 Combining 2 amounts Making pairs Length and height Time	Building 9 & 10 WK7-9 Counting to 9 & 10 Comparing numbers to 10 Bonds to 10 3D shapes Spatial awareness Patterns	 To 20 and beyond WK 1-3 Building numbers beyond 10 Counting numbers beyond 10 Spatial reasoning (1) Match, rotate, manipulate First, then, now WK4-6 Adding more Taking away Spatial reasoning (2) Compose and decompose 	Find my pattern WK7-9 Doubling, sharing & grouping Even and odd Spatial reasoning (3) Visualise and build On the move! WK10-12 Deepening understanding Patterns and relationships Spatial reasoning (4) Mapping
Year 1	 Exploring pattern. <u>Place Value WK1-5</u> given a number, identify one more and one less 	Addition Subtraction WK6-10 add and subtract one-digit	Place Value WK1-3 Within 20	Place Value WK7-8 Within 50	Multiplication Division WK1-3 solve one-step problems	Place Value WK7-8 Within 100
	Addition, Subtraction, WK6-10 read, write and interpret mathematical statements involving addition (+),	 and two-digit numbers to 20, including zero solve one-step problems that involve addition and subtraction, using concrete objects and pictorial 	Addition & Subtraction WK3-6 Within 20 - x2, x5, x10	Measurement Length / Height WK9-10 Compare, describe and solve practical problems for: I lengths and heights [for example, long/short,	involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Money WK9 recognise and know the value of different denominations of coins and notes.
	 subtraction (-) and equals (=) signs represent and use number bonds and related subtraction facts within 20 	representations, and missing number problems such as 7 = 9. <u>Geometry; Shape WK11</u> Recognise and name common 2- D and 3-D shapes, including:		Ionger/shorter, tall/short, double/half] <u>Measurement Weight</u> <u>Volume WK11-12</u> mass/weight [for example, heavy/light, heavier than, lighter than]	 Fractions WK4-5 recognise, find and name a half as one of two equal parts of an object, shape or quantity recognise, find and name a guarter as one of four 	Time WK10-11 sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]

	 2-D shapes [for example, rectangles (including squares), circles and triangles] 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 		 capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] Measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) time [for example, quicker, slower, earlier, later] 	equal parts of an object, shape or quantity. <u>Geometry: Position and</u> <u>direction WK6</u> describe position, direction and movement, including whole, half, quarter and three-quarter turns.	 recognise and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
from 0, and any number, backward identify, re estimate nu different rep including the read and writi at least 100 and in words compare numbers fror use <, > and = use place number fac problems. recognise the of each digit number (tens <u>Additic</u> <u>Subtraction</u> recall and use subtraction fluently, and use related fa show that ac numbers car any order (and subtrac number fro cannot recognise a inverse between a	 is of 2, 3, and 5 identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid] compare and sort common 2-D and 3-D shapes and everyday objects. 	Money WK1-2 recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value find different combinations of coins that equal the same amounts of money solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change Multiplication, Division WK3-7 recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot solve problems involving multiplication and division, using materials, arrays,	appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the	Fractions WK1-3• recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity• write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.• Time WK4-6 • compare and sequence intervals of time• tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these timesknow the number of minutes in an hour and the number of hours in a day.	 Statistics WK7-8 interpret and construct simple pictograms, tally charts, block diagrams and simple tables ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data. Position and Direction WK9-10 order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise and anti-clockwise).

	check calculations and		repeated addition, mental			
	solve missing number		methods, and			
	problems.		multiplication and division			
	add and subtract numbers					
	using concrete objects,					
	pictorial representations,		 calculate mathematical 			
	and mentally, including:		statements for			
	 a two-digit 		multiplication and division			
	number and ones		within the multiplication			
	 a two-digit 		tables and write them			
	number and tens		using the multiplication			
	 two two-digit 		. .			
	numbers adding three one-		(×), division (÷) and equals			
	digit numbers		(=) signs			
	 solve problems with 					
	addition and subtraction:		 facts, including problems 			
	 using concrete objects and 		in contexts.			
	pictorial representations,					
	including those involving					
	5 5					
	numbers, quantities and					
	measures					
	 applying their increasing 					
	knowledge of mental and					
	written methods					
Veer 2	Place Value WK1-3	Addition, subtraction WK7-8	Multiplication,	Fractions A WK7-9	Fractions B WK1-2	Shape WK8-9
Year 3	 count from 0 in multiples of 	 estimate the answer to a 	Division B WK1-3	 Recap year 2 fractions unit 	 recognise and use fractions 	 measure the perimeter of
	4, 8, 50 and 100; find 10 or	calculation and use inverse	 solve problems, including 	 count up and down in 	as numbers: unit fractions	simple 2-D shapes
	100 more or less than a	operations to check	missing number problems,	tenths; recognise that	and non-unit fractions with	 draw 2-D shapes and make
	given number	answers	involving multiplication	tenths arise from dividing	small denominators	3-D shapes using modelling
	 recognise the place value 	 solve problems, including 	and division, including	an object into 10 equal	 recognise and show, using 	materials; recognise 3-D
	of each digit in a three-digit	missing number problems,	positive integer scaling	parts and in dividing one-	diagrams, equivalent	shapes in different
	number (hundreds, tens,	using number facts, place	problems and	digit numbers or quantities	fractions with small	orientations and describe
	ones)	value, and more complex	correspondence problems	by 10	denominators	them
	 compare and order 	addition and subtraction.	in which n objects are	 recognise, find and write 	 compare and order unit 	 recognise angles as a
	numbers up to 1000 identify, represent and		connected to m objects.	fractions of a discrete set of objects: unit fractions and	fractions, and fractions with the same	property of shape or a description of a turn
	estimate numbers using		Length	non-unit fractions with	denominators	 identify right angles,
	different representations		Perimeter WK4-6	small denominators	 solve problems that involve 	recognise that two right
	 read and write numbers up 		 measure, compare, add 		all of the above.	angles make a half-turn,
	to 1000 in numerals and in	Multiplication,	and subtract: lengths	Mass	 add and subtract fractions 	three make three quarters
	words	Division WK9-12	(m/cm/mm); mass (kg/g);	Capacity WK10-12	with the same	of a turn and four a
	solve number problems	 recall and use 	volume/capacity (l/ml)	 measure, compare, add 	denominator within one	complete turn; identify
	and practical problems	multiplication and division		and subtract: lengths		whether angles are greater
	involving these ideas.	facts for the 3, 4 and 8		(m/cm/mm); mass (kg/g);	whole [for example, $\frac{5}{7}$ +	than or less than a right
		multiplication tables		volume/capacity (l/ml)	1 6	angle
	Addition,	 write and calculate 			$\frac{1}{7} = \frac{6}{7}$]	 identify horizontal and
	Subtraction WK4-6	mathematical statements for multiplication and				vertical lines and pairs of

	add and subtract numbers	division using the			solve problems that involve all	perpendicular and parallel
	mentally, including:	multiplication tables that			of the above.	lines.
	a three-digit	they know, including for			Money WK3-4	incs.
	number and ones	two-digit numbers times			 add and subtract amounts 	Statistics WK10-11
	a three-digit	one-digit numbers unles			of money to give change,	 interpret and present data
	number and tens	mental and progressing to			using both £ and p in	using bar charts,
	a three-digit	formal written methods			practical contexts	pictograms and tables
	number and	Ionnal written methods			practical contexts	solve one-step and two-step
	hundreds	-			Time WK5-7	questions [for example, 'How
	 add and subtract numbers 				 tell and write the time from 	many more?' and 'How many
	with up to three digits,				an analogue clock,	fewer?'] using information
	using formal written				including using Roman	presented in scaled bar charts
	methods of columnar				numerals from I to XII, and	and pictograms and tables.
	addition and subtraction				12-hour and 24-hour clocks	and pictograms and tables.
					 estimate and read time 	
					with increasing accuracy to	
					the nearest minute; record	
					and compare time in terms	
					of seconds, minutes and	
					hours; use vocabulary such	
					as o'clock, a.m./p.m.,	
					morning, afternoon, noon	
					and midnight	
					 know the number of 	
					seconds in a minute and	
					the number of days in each	
					month, year and leap year	
					 compare durations of 	
					events [for example to	
					calculate the time taken by	
					particular events or tasks].	
Noor A	Place Value WK1-4	Area WK8	Multiplication,	Fractions WK6-9	Decimals B WK1-2	Shape WK8-9
Year 4	 count in multiples of 6, 7, 9, 	find the area of rectilinear	Division B WK1-3	 recognise and show, using 	round decimals with one	 compare and classify
	25 and 1000	shapes by counting squares	recognise and use factor	diagrams, families of	decimal place to the	geometric shapes,
	 find 1000 more or less than 		pairs and commutativity in	common equivalent	nearest whole number	including quadrilaterals
	a given number		mental calculations	fractions	 compare numbers with the 	and triangles, based on
	 count backwards through 	Multiplication,	 multiply two-digit and 	 count up and down in 	same number of decimal	their properties and sizes
	zero to include negative	Division A WK9-11	three-digit numbers by a	hundredths; recognise that	places up to two decimal	 identify acute and obtuse
	numbers	 recall multiplication and 	one-digit number using	hundredths arise when	places	angles and compare and
	 recognise the place value 	division facts for	formal written layout	dividing an object by one		order angles up to two
	of each digit in a four-digit	multiplication tables up to	 solve problems involving 	hundred and dividing	Money WK3-4	right angles by size
	number (thousands,	12 × 12	multiplying and adding,	tenths by ten	 estimate, compare and 	 identify lines of symmetry
	hundreds, tens, and ones)	 use place value, known and 	including using the	 solve problems involving 	calculate different	in 2-D shapes presented in
	 order and compare 	derived facts to multiply	distributive law to multiply	increasingly harder	measures, including money	different orientations
	numbers beyond 1000	and divide mentally,	two digit numbers by one	fractions to calculate	in pounds and pence	 complete a simple
	 identify, represent and 	including: multiplying by 0	digit, integer scaling	quantities, and fractions to	-	symmetric figure with
	estimate numbers using	and 1; dividing by 1;	problems and harder	divide quantities, including	Time WK5-6	respect to a specific line of
	different representations	multiplying together three	correspondence problems	non-unit fractions where	 read, write and convert 	symmetry.
	 round any number to the 	numbers	such as n objects are	the answer is a whole	time between analogue	
	nearest 10, 100 or 1000		connected to m objects.	number	and digital 12- and 24-hour	Statistics WK10
	 solve number and practical problems that involve all of 	-	Length (Device stor M// 4 5	 add and subtract fractions 	clocks	 solve comparison, sum and difference, problems, using
	problems that involve all of		Length /Perimeter WK4-5	with the same	 solve problems involving 	difference problems using information presented in
	the above and with			denominator	converting from hours to	information presented in

	 increasingly large positive numbers read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. <u>Addition</u>, <u>Subtraction WK5-7</u> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. 		 Convert between different units of measure [for example, kilometre to metre; hour to minute] measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres 	 Fractions and Decimals A <u>WK10-12</u> recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to 1/4, 1/2, 3/4 find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths solve simple measure and money problems involving fractions and decimals to two decimal places. 	minutes; minutes to seconds; years to months; weeks to days.	 bar charts, pictograms, tables and other graphs. interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Position and Direction WK11-12 describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon.
Year 5	 Place Value WK1-3 read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	 Multiplication, Division A WK6- 8 identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers, and the notation for squared (²) and cubed (³) solve problems involving multiplication and division 	 Multiplication, Division B WK1- 3 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two- digit numbers multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, 	 Decimals Percentages WK6-8 read and write decimal numbers as fractions [for example, 0.71 =, 71/100] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal 	 Shape WK1-3 identify 3-D shapes, including cubes and other cuboids, from 2-D representations know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (°) identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and 1/2 a turn (total 180°) other multiples of 90° use the properties of rectangles to deduce related facts and angles 	approximate equivalences between metric units and common imperial units such as inches, pounds and pints <u>Volume WK12</u>

	Addition, Subtraction WK4-5 add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	including using their knowledge of factors and multiples, squares and cubes Fractions A WK9-12 compare and order fractions whose denominators are all multiples of the same number identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1$ $\frac{1}{5}$]	 including scaling by simple fractions and problems involving simple rates. Fractions B WK4-5 add and subtract fractions with the same denominator and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	 solve problems which require knowing percentage and decimal equivalents of ¹/₂, ¹/₄, ¹/₅, ²/₅, ⁴/₅ and those fractions with a denominator of a multiple of 10 or 25. <u>Perimeter / Area WK9-10</u> measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (m²) and square metres (m²) and estimate the area of irregular shapes <u>Statistics WK11-12</u> solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables. 	distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Position and Direction WK4-5 identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. Decimals WK6-8 • solve problems involving number up to three decimal places	 solve problems involving converting between units of time use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.
Year 6	 Place Value WK1-2 read, write, order and compare numbers up to 10 000 000 and determine the value of each digit round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above. 	 Fractions WK8-11 use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions multiply simple pairs of proper fractions, writing the answer in its simplest 	 <u>Ratio WK1-2</u> solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison solve problems involving similar shapes where the scale factor is known or can be found 	Fraction, decimals & Percentages WK7-8 solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Perimeter, Area, Volume WK9- 10	 Shape WK1-3 draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circles, including radius, diameter and know 	Investigative Work Finance for the Future Themed Projects

	Division WK3-7	1 1	•	solve problems involving		recognise that shapes with	that the diameter is twice	
•	multiply multi-digit	form [for example, $\frac{1}{4} \times \frac{1}{2}$		unequal sharing and		the same areas can have	the radius	
	numbers up to 4 digits by a			grouping using knowledge		different perimeters and	 recognise angles where 	
	two-digit whole number	$=\frac{1}{8}$]		of fractions and multiples.		vice versa	they meet at a point, are on	
	using the formal written	 divide proper fractions by 				recognise when it is	a straight line, or are	
	method of long	whole numbers [for		Algebra WK3-4		possible to use formulae	vertically opposite, and	
	multiplication		•	use simple formulae		for area and volume of	find missing angles.	
•	divide numbers up to 4	example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	•	generate and describe		shapes		
	digits by a two-digit whole	5 0		linear number sequences	- 1	calculate the area of		
	number using the formal	Managements Converting	•	express missing number		parallelograms and	Problem Solving	
	written method of long	Measurement: Converting		problems algebraically		triangles		
	division, and interpret	Units WK12	•	find pairs of numbers that		calculate, estimate and	Position and Direction WK4	
	remainders as whole	 solve problems involving 		satisfy an equation with		compare volume of cubes	 describe positions on the 	
	number remainders,	the calculation and		two unknowns		and cuboids using standard	full coordinate grid (all four	
	fractions, or by rounding,	conversion of units of measure, using decimal		enumerate possibilities of		units, including cubic	quadrants)	
	as appropriate for the	notation up to three	COI	mbinations of two variables.		centimetres (cm ³) and	 draw and translate simple 	
	context	decimal places where				cubic metres (m ³), and	shapes on the coordinate	
•	divide numbers up to 4	appropriate		Decimals WK5-6		extending to other units	plane, and reflect them in	
	digits by a two-digit	 use, read, write and 	÷.,	associate a fraction with		[for example, mm ³ and	the axes.	
	number using the formal	convert between standard		division and calculate		km³].	- ·	
	written method of short	units, converting		decimal fraction		Charlins MIK11 12	Teamwork	
	division where	measurements of length,		equivalents [for example,		Statistics WK11-12 interpret and construct pie		
	appropriate, interpreting	mass, volume and time		0.375] for a simple fraction	-	charts and line graphs and		
	remainders according to the context	from a smaller unit of		[for example, $\frac{3}{8}$]		use these to solve		
	-	measure to a larger unit,		0		problems		
-	perform mental calculations, including with	and vice versa, using		identify the value of each		calculate and interpret the		
	mixed operations and large	decimal		digit in numbers given to	_	mean as an average.		
	numbers	 notation to up to three 		three decimal places and		mean as an average.		
	identify common factors,	decimal places		multiply and divide				
	common multiples and	 convert between miles and 		numbers by 10, 100 and				
	prime numbers	kilometres		1000 giving answers up to				
	use their knowledge of the							
	order of operations to			three decimal places				
	carry out calculations							
	involving the four		•	multiply one-digit numbers				
	operations			with up to two decimal				
•	solve addition and			places by whole numbers				
	subtraction multi-step		÷.,	use written division				
	problems in contexts,			methods in cases where				
	deciding which operations			the answer has up to two				
	and methods to use and			decimal places				
	why			solve problems which				
•	solve problems involving			require answers to be				
	addition, subtraction,			rounded to specified				
	multiplication and division			degrees of accuracy				
•	use estimation to check							
	answers to calculations							
	and determine, in the							
	context of a problem, an							
	appropriate degree of							
	accuracy.							
					1			