Whitkirk Primary School – Maths Progression of Pitch

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value	Early number	Sort, represent	Count forwards	Represent numbers to	Represent numbers	Read, write, order	Read, write,
	sense: counting	and count objects to	and backwards and	1,000	to 1,000	and compare	order and
		20	compare			numbers to at	compare
	Numbers: Reading and		numbers within	100s, 10s and 1s	100s, 10s and 1s	least 1 000 000	numbers up to
	writing	Introduce <, > and =	20 and 50			and determine the	10 000 000 and
	Numbers			Number line to	Number line to	value of each digit.	determine the
		Ordinal numbers	Count objects	1,000	1,000		value of each
	Subitise with numbers		and represent			Count forwards or	digit.
	1-5	Using a number	numbers in 100	Find 1, 10, 100	Find 1, 10, 100 and	backwards in steps of	
		Line	and write in words	more or less than a	1,000 more or less	powers of 10 for any	Round any
	Compare numbers		and numerals	given number		given number up	whole number to
	within 1-5	Count forwards			Compare numbers	to 1 000 000	a required
	understanding the	and backwards	Use place value	Compare objects and			degree of
	cardinal value of each	up to 100	Chart	numbers to 1,000	Order numbers	Interpret negative	accuracy.
	number.					numbers in context,	
		Write numbers	Compare and	Order numbers	Count in 1,000s	count forwards and	Use negative
	Ordering numbers:	to 100	order objects			backwards with	numbers in
	Number representation		and numbers	Count in 50s	Count in 25s	positive and	context, and
	·	Tens and ones				negative whole	calculate
			Count in 2s 3s 5s		Round to the	numbers, including	intervals across
		One more and	and 10s		nearest 10, 100	through zero	zero.
		one less			and 1,000		
			Know 10 more			Round any	Solve number
		Compare groups of	and 10 less		Partitioning	number up to 1	and practical
		objects and numbers				000 000 to the	problems that involve
			Compare money		Number line to	nearest 10, 100,	all of the above.
		Order groups of	, ,		10,000	1000, 10 000 and	
		objects and			·	100 000	
		numbers			Negative numbers		
					, and the second	Solve number	
		Introducing a 100			Roman numerals to	problems and	
		square			100	practical	
		·				problems that	
		Partitioning numbers				involve all of the	
		J				above	
						Read Roman	
						numerals to 1000	

						(M) and recognise	
						years written in	
						Roman numerals	
Addition and	Finding one	Intro parts and	Know addition	Add and	Add and subtract	Add and subtract	Solve addition
Subtraction	more than a	wholes (single	and subtraction	subtract	1s, 10s, 100s and	whole numbers	and subtraction
	number	and group object)	fact families to	multiples of 100	1,000s	with more than 4-	multi step problems
			20			digits, including	in contexts, deciding
	Finding one	Part-whole model		Add and subtract 1s	Add two 3-digit	using formal	which operations and
	less than a		Check calculations		numbers - not	written methods	methods to use and
	number	Addition symbol	and co <mark>mpare number</mark>	Add and subtract 3-	crossing 10 or 100	(columnar	why.
			Sentences	digit an <mark>d 1</mark> -digit		addition and	
	Number bonds	Addition facts		number <mark>s</mark> – not	Add two 4-digit	subtraction).	Solve problems
			Know bo <mark>nds</mark> to	crossing 10	numbers — no		involving addition,
	Automatically	Find and make	100		exchange	Add and subtract	subtraction,
	recall number	number bonds to 10	A 7 /	Add a 2-digit and 1-		numbers	multiplication and
	bonds for	and 20	Know 10 more and	digit number -	Add two 3-digit	mentally with	division.
	numbers 0-5.		10 less	crossing 10	numbers - crossing	increasingly large	
		Compare number	/ \ \		10 or 100	numbers.	Use estimation
		bonds	Add and subtract 10s	Ad <mark>d 3</mark> -digit and 1-			to check answers
				dig <mark>it nu</mark> mbers —	Add two 4-digit		to calculations
		Ad <mark>ditio</mark> n:	Add and subtract one	crossing 10	numbers – one		and determine in
		ad <mark>ding</mark> together	digit and 2 digit		exchange an <mark>d mo</mark> re		the context of a
		adding more	numbers from 2	Add 3-digit and	than one exc <mark>hang</mark> e		problem, an
		ad <mark>dition</mark> using bonds	digit numbers not	2-digit numbers –			appropriate degree
			crossing and	crossing 100	Subtract a 3-digit		of accuracy.
		Fin <mark>ding</mark> a part	crossing 10		number from a 3-		
				Add two 2-digit	digit number - no		
		Subtraction:	Mixed addition	numbers - crossing 10	exchange		
		crossing out	and subtraction	- ad <mark>d on</mark> es & add			
		using the symbol	activities	tens	Subtract two 4-		
		find a part			digit numbers — no		
		counting back	Know bonds to 100	Add and	exchange		
		finding the difference		subtract a 2-			
		3 33	Add 3 1 digit	digit a <mark>nd 3</mark> -digit	Subtract a 3-digit		
		Comparing addition	numbers	number <mark>s – n</mark> ot	number from a 3-		
		and subtraction		crossing 10 or	digit number -		
		statements	Find totals and	100	exchange		
			differences and				
		Add by counting on	find change	Add a 2-digit and 3-	Subtract two 4-		
		within 20	, ,	digit numbers —	digit numbers —		
				crossing 10 or 100	one exchange and		
		Add by making			more than one		

		10		Add two 3-digit	exchange		
		10	A -011	numbers — not	exchange		
		Subtractions – not		crossing 10 or 100	Estimate answers		
		crossing 10 and		and crossing 10 or	Latinate answers		
		crossing 10 and		100	Select and use		
		crossing to		100	efficient strategies		
				Subtract a 1-digit	ejjicient strategies		
				number from 2-digits			
				- crossing 10			
				- crossing to			
	0.1			Subtract a 1-digit			
				number from a 3-digit			
				number — crossing 10			
				number – crossing to			
		\ \ \ \ \		Subtract 3-digit			
		N. V.	/\	and 2-digit numbers —			
		, , , , , , , , , , , , , , , , , , ,	/ \ ' /	not crossing 100 and			
			/ \	crossing 100			
				crossing roo			
				Ad <mark>d an</mark> d subtract			
				100s			
				1003			
				Subtract a 2-digit			
				number from a 2-digit			
				number - crossing 10			
				Subtract a 2- digit			
				number from a 3-digit			
				number - crossing 10			
				or 100			
				Subtr <mark>act a</mark> 3-digit		7	
				number from a 3-digit		<i>y</i>	
				number – no			
				exchan <mark>ge a</mark> nd			
				exchange			
				Estimate answers to			
				calculations			
Multiplication	Doubling numbers	Count in 2's	Make equal groups	Multiplication — equal	6, 7, 9, 11 and 12	Identify multiples	Multiply multi-digit
and division				groups	times-tables	and factors,	number up to 4
	Sharing and halving					including finding	digits by a 2

numbers	Count in 5's	Add squal groups	Multiplication using	6 7 0 11 and 12	all factor pairs of	digit number
numbers	Count in 5 s	Add equal groups	Multiplication using the symbol	6, 7, 9, 11 and 12 times table and	all factor pairs of a number, and	digit number using the formal
	Count in 10's	Maka amana	the symbol			written method
	Count in 10's	Make arrays		division facts	common factors	
	Mala and add and	D	Using arrays 2, 3, 4, 5 and 8 times-table	Multiplu Lu 10 and	of two numbers.	of long
	Make and add equal	Recognise make	5 and 8 times-table	Multiply by 10 and	Various and area than	multiplication.
	groups	and add equal groups	M	100	Know and use the	D I
	Malaaaaaaa	Mantein It and an arrive and	Make equal groups -	Multiply by 1 and 0	vocabulary of prime	Divide numbers
	Make arrays	Multiplication using x	sharing and grouping	D:::: 10 1	numbers, prime	up to 4 digits by
	Make doubles	symbol	Mulatulu ku 2 4 E	Divide by 10 and	factors and composite	a 2 digit whole
	Make doubles	Males daulalas	Multiply by 3, 4, 5	100	(nonprime) numbers.	number using
	Malaaaaaalaaaaaa	Make doubles	and 10	Modeln by an district de	Farablish out ash on	the formal
	Make equal groups —	2E10 .:	Divide L., 2, 2, E., 1	Multiply and divide	Establish whether	written method
	Grouping	x2 x5 x10 times	Divide by 2, 3, 5 and	by 3, 6	a number up to	of long division,
	Mala	tables	10	Divide by 1 and	100 is prime and	and interpret
	Make equal groups -	Divide by 0 E and 10	Multiplu O di air lau 1	Divide by 1 and	recall prime	remainders as
	sharing	Divide by 2, 5 and 10	Multiply 2-digit by 1-	ltself	numbers up to 19.	whole number
			digit	Miles I O Is so I	19.	remainders,
			D: :4. 0 4:-5. L 1	Multiply 2-digits by	D	fractions or by
			Divide 2-digit by 1-	1-digit	Recognise and	rounding as
			digit	D: : 1 0 1: : 1 1	use square	appropriate for
			C I	Divide 2-digits by 1-	numbers and	the context.
			Scaling	digit	cube numbers,	D: 11
				D: : 1 2 1: : 1 1	and the notation	Divide numbers
				Divide 3-digits by 1-	for squared (2)	up to 4 digits by
				digit	and cubed (3).	a 2 digit number
				Maria		using the formal
				Multiply 3 numbers	Solve problems	written method
					involving	of short division,
				Factor pairs	multiplication	interpreting
				F.C	and division	remainders
				Efficient	including using	according to
				multiplication	their knowledge	context.
				NAZ to a la la	of factors and	D (
				Written methods	multiples,	Perform mental
					squares and	calculations,
				Correspondence	cubes.	including with
				problems	NA local	mixed
					Multiply and	operations and
					divide numbers	large numbers.
					mentally drawing	Identify common
					upon known facts.	factors, common
						multiples and

						Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. 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 and subtraction, multiplication and division and a combination of these, including understanding	prime numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations.
						the use of the equals sign.	
Fractions (decimals and percentages)	Halving	Making a half Making a whole Find a half of a quantity Making a quarter Find a quarter	Make equal parts Recognise and find half, a third, and a quarter Count in fractions Fraction problem solving	Recognise and find half, quarter and Third Unit and non-unit fractions Equivalence ½ and 2/4 Equivalent fractions	What is a fraction? Unit and non-unit fractions Equivalent fractions Count in fractions Tenths	Compare and order fractions whose denominators are multiples of the same number. Identify, name and write equivalent fractions of a given fraction,	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including

Find a quarter		Count in tenths	represented visually	fractions > 1
of a quantity	Count in fractions		including tenths and	
		Fractions of a set of	hundredths.	Generate and
Find a quarter	Making the whole	objects		describe linear
			Recognise mixed	number
	Tenths	Add fractions	numbers and	sequences (with
			improper fractions	fractions)
	Count in tenths	Add 2 or more	and convert from one	
		fractions	form to the other	Add and subtract
	Tenths as decimals		and write	fractions with
		Subtract fractions	mathematical	different
	Fractions on a		statements >1 as	denominations
	number line	Subtract 2 fractions	a mixed number.	and mixed
		_		numbers, using
	Fractions of a set of	Subtract from whole	Add and subtract	the concept of
	objects	amounts	fractions with the	equivalent
	-		same denominator	fractions.
	Compare fractions	Fractions greater	and denominators	
	. ,	than 1	that are multiples	Multiply simple
	Order fractions		of the same number.	pairs of proper
		Calculate fractions		fractions, writing
	Add fractions	of a quantity	Multiply proper	the answer in its
			fractions and	simplest form.
	Subtract fractions	Problem solving —	mixed numbers	, ,
		calculate quantities	by whole numbers,	Divide proper
		'	supported by	fractions by
		Decimals:	materials and	whole numbers.
		Recognise tenths	diagrams.	
		and hundredths		Associate a
			Read and write	fraction with division
		Tenths as decimals	decimal numbers	and calculate
			as fractions.	decimal fraction
		Tenths on a place	,	equivalents [for
		value grid	Solve problems	example, 0.375]
		J	involving	for a simple
		Tenths on a	multiplication	fraction.
		number line	and division,	
			including scaling	Recall and use
		Divide 1-digit by 10	by simple	equivalences
			fractions and	between simple
		Divide 2-digits by	problems	fractions,
		10	involving simple	decimals and

					Hundredths Hundredths as decimals Hundredths on a place value grid Divide 1 or 2-digits by 100 Bonds to 10 and 100 Make a whole	rates.	percentages, including in different contexts
					Write decimals Compare decimals Order decimals		
					Round decimals Halves and quarters as decimals		
Geometry	Shape Compare numbers within 1-5 understanding the cardinal value of each number Patterns Continue, copy and create repeating patterns.	Recognise and name 3D shapes Sort 3D shapes Recognise and name 2D shapes Sort 2D shapes Patterns with 3D and 2D shapes	Recognise 2 and 3D shape Count sides and vertices on 2D shape Lines of symmetry Count faces, edges and vertices on 3D shape Describe position	Turns and angles Right angles in shapes Compare angles Draw accurately Horizontal and vertical Parallel and perpendicular	Turns and angles Right angles in shapes Compare angles Identify angles Compare and order angles Horizontal and vertical	Read, write, order and compare numbers with up to three decimal places. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Round decimals with two decimal places to the nearest whole	Identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1000 giving answers up to 3dp. Multiply one digit numbers with up to 2dp by whole

Describe turns	Describe movement	Recognise and	Recognise and	number and to one	numbers.
	and turns	describe 2-D shapes	describe 2-D	decimal place.	
Describe position		1	shapes	'	Use written
		Recognise and		Solve problems	division methods
		describe 3-D shapes	What is area?	involving number	in cases where
				up to three decimal	the answer has
		Make 3-D shapes	Comparing area	places.	up to two
		'		'	decimal places.
			Counting squares	Recognise the per	·
				cent symbol (%)	Solve problems
			Making shapes	and understand	which require
				that per cent relates	answers to be
				to 'number of parts	rounded to
			Triangles	per hundred', and	specified
				write percentages	degrees of
			Quadrilaterals	as a fraction with denominator 100,	accuracy.
			Lines of symmetry	and as a decimal.	Solve problems involving the
			Complete a	Solve problems	calculation of
			symmetric figure	which require	percentages [for
				knowing	example, of
				percentage and	measures and
				decimal	such as 15% of
				equivalents of	360] and the use
				and those	of percentages
				fractions with a	for comparison.
				denominator of a	
				multiple of 10 or	Recall and use
				25.	equivalences
					between simple
				Solve problems	FDP including in
				involving number	different
				up to three	contexts.
				decimal places.	
				Modeinto	
				Multiply and	
				divide whole	
				numbers and	
				those involving	
				decimals by 10, 100 and 1000.	
				100 ana 1000.	

					1		
						Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	
Measurement	Weight	Compare length	Measure and compare	O'clock and half	Years, months, weeks	Identify 3D	Illustrate and
			length in cm and m	past	and days	shapes, including	name parts of
	Length and width	Compare heights			3	cubes and other	circles, including
		T V	Four operations	Quarter past	Hours, minutes and	cuboids, from 2D	radius, diameter
	Time	Measuring	and problem solving	and quarter to	seconds	representations.	and
	Capacity	length —non-standard	with length		Telling the time to		circumference
				Months and years	5 minutes	Use the properties of	and know that the
		Intr <mark>oducing a ru</mark> ler	Tell time to the hour			rectangles to	diameter is
			half hour, quarter	Hours in a day	Telling the time to	deduce related	twice the radius.
		Ad <mark>ding</mark> length	hour, and to 5		the minute	facts and find	
		pro <mark>blem</mark> s	minutes	Telling the time to 5		missing lengths	Draw 2D shapes
				minutes	Using a.m. and	and angles.	using given
		Subtracting length	Writing time		p.m.		dimensions and
		Pro <mark>blem</mark> s		Telling the time		Distinguish	angles.
			Find and compare	to the minute	24-hour clock	between regular	
		Intr <mark>oducing weight</mark>	durations of time			and irregular	Compare and
		and mass		Usi <mark>ng a.</mark> m. and p.m.	Analogue to digital	polygons based	classify
			Introduce weight and		– 12 hour and 24	on reasoning	geometric
		Measure and compare	mass	24-h <mark>our c</mark> lock	hour	about equal sides	shapes based on
		mass				and angles.	their properties
			Compare and	Findin <mark>g an</mark> d	Equivalent lengths -		and sizes and
		Weight and	measure weight and	comp <mark>aring</mark> the	m & cm and mm &	Know angles are	find unknown
		mass problems	mass	durati <mark>on</mark>	cm	measured in	angles in any
						degrees: estimate	triangles,
		Introducing	Introdu <mark>ce ca</mark> pacity	Compar <mark>ing d</mark> urations	Add and subtract	and compare	quadrilaterals
		capacity and volume	and vol <mark>ume in</mark>		lengths	acute, obtuse and	and regular
			millilitres and	Start and end times		reflex angles.	polygons. 2
		Measure and compare	litres		Kilometres		
		Capacity		Measuring time		Draw given	Recognise angles
			4 operations	in seconds	Measure perimeter	angles, and measure	where they meet
		Recognising coins	with mass and			them in	at a point, are on

		volume	Measure length	Perimeter on a grid	degrees (o).	a straight line, or
Cour	nting in coins	Volume	in m, cm and mm	Trefilleter on a grid	degrees (0).	are vertically
Cour	inting in coms		in in, cin did iiiii	Perimeter of a	 Identify: angles at	opposite, and
Refo	ore and after		Equivalent length in	rectangle	a point and one	find missing
- Land Control of the	ore and agree		cm & mm and m &	rectungle	whole turn (total	angles.
Date	200		cm cm	Perimeter of	360o), angles at a	angles.
			CIII	rectilinear shapes	point on a straight	Describe positions on
Time	e to the hour		Compare lengths	rectiffical strapes	line and ½ a turn	the full coordinate
	e to the noun		oompare lengths	Pounds and pence	(total 180o) other	grid (all four
Time	e to half the hour		Add and subtract	Todilas alla pellec	multiples of 90o.	quadrants).
	the Hour		lengths	Convert pounds	matapies of 700.	quairumes).
Writi	ing time		ionguna (and pence	Identify, describe	Draw and translate
			Measure and	and points	and represent the	simple shapes on the
Com	paring time		calculate perimeter	Add and subtract	position of a shape	coordinate plane,
				money	following a reflection	and reflect them in
		/\ \ /	Compare mass	J	or translation, using	the axes.
				Find change	the appropriate	
			Mea <mark>s</mark> ure mass		language, and know	
			Add and subtract	Ordering money	that the shape has	
			mass		not changed.	
				Estimating money	3	
			Compare volume			
			Measure capacity			
			Compare capacity			
			Ad <mark>d and</mark> subtract			
			cap <mark>acity</mark>			
			Tem <mark>perat</mark> ure			
			Count money			
			(pound <mark>s an</mark> d			
			pence)			
			Convert pounds			
			and pence			
			Add and subtract			
			money			

Statistics	Make tally charts	Make a tally chart	Interpret charts	Measure and	Solve problems
	5	J	'	calculate the	involving the
	Draw pictograms	Draw and interpret	Comparison, sum	perimeter of	calculation and
	ı	pictograms (2, 5	and difference	composite rectilinear	conversion of
	Interpret pictograms	and 10)	Introducing line	shapes in centimetres	units of
	J J		graphs	and metres	measure, using
	Block diagrams	Draw and interpret	J. 4F.14	calculate and	decimal notation
	- To are area graines	bar charts	Draw and interpret	compare the area	up to three
		our charts	line graphs	of rectangles	decimal places
		Draw and interpret	into graphis	(including	where
		tables		squares), and	appropriate.
		tubics		including using	арргорпасс.
				standard units,	Use, read, write
				square centimetres	and convert
				(cm ²) and square	between standard
				metres (m ²) and	units, converting
				estimate the area	measurements
				of irregular shapes.	of length, mass,
				oj irregular shapes.	volume and time
				Convert between	
					from a smaller
				different units of	unit of measure
				metric measure	to a larger unit,
				[for example, km	and vice versa, using
				and m; cm and m;	decimal
				cm and mm; g	notation to up to
				and kg; I and ml].	3dp.
				Understand and	Convert between
				use approximate	miles and kilometres.
				equivalences	
				between metric	Recognise that
				units and common	shapes with the
				imperial units such as	same areas can
				inches, pounds and	have different
				pints.	perimeters and
					vice versa.
				Solve problems	
				involving converting	Recognise when
				between units of	it is possible to
				time.	use formulae for
					area and volume
				Estimate volume	of shapes.

			[for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]. Use all four operations to solve problems involving measure.	Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm³, m³ and extending to other units (mm³, km³).
Algebra			Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.	Interpret and construct pie charts and line graphs and use these to solve problems. Calculate the mean as an average. Use simple formulae Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with

