

# "Mathematics, rightly viewed, possesses not only truth but supreme beauty" - Bertrand Russell

Curriculum Intent							
<ul> <li>The Curriculum at FHC is designed to ensure that children enjoy mathematics and have a secure and deep understanding of fundamental mathematical concepts and procedures when they leave us to go to secondary school. We want children to see the mathematics that surrounds them every day and enjoy developing vital life skills in this subject.</li> <li>The national curriculum for mathematics aims to ensure that all pupils: <ul> <li>To implement the current legal requirements of the Foundation Stage (FS) and the National Curriculum (NC).</li> <li>To foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts.</li> <li>To ensure pupils become fluent in the fundamentals of mathematics, developing conceptual knowledge and an ability to recall and apply knowledge rapidly and accurately.</li> <li>To ensure that pupils can reason mathematically and solve problems</li> <li>For our children to develop a 'can do' attitude and perceive themselves as mathematicians.</li> <li>To broaden children's knowledge and understanding of how mathematics is used in the wider world.</li> </ul> </li> </ul>							
Philosophical	At Fieldhead Carr, we promote the research of mathematician and educator, Jo Boaler who has created '8 Positive Norms' to support children in developing a growth mindset towards learning maths. Beliefs such as, "Everyone can do math to the highest level.". The idea that some people are born "Good at maths" and some are not, is just not true and yet many still believe this. The latest research tells us that because of the plasticity of the brain, children can reach any level in maths. Communicating this growth mindset message, "Everyone can learn maths," helps children understand that maths success is not about talent and ability but hard work, good strategies and help from others.						
Linked to my Life	Maths is the universal language that is applied in almost every aspect of life. At Fieldhead Carr we have regular 'No Pen Maths Problem Solving Lessons' where children are given the opportunity to explore maths in the everyday. We also hold 'Maths Days' where children partake in problem solving and reasoning activities. Children also use maths throughout other subjects in the curriculum from History to Music.						
Practical Skills	Teachers use the Concrete, Pictorial, Abstract approach (CPA) which is a highly effective approach to teaching that develops a deep and sustainable understanding of maths in pupils. Children often find maths difficult because it is abstract. The CPA approach helps children learn new ideas and build on their existing knowledge by introducing abstract concepts in a more familiar and tangible way. The end result is for children to be able to move to the abstract. Children are given opportunities in each lesson to problem solve and reason. Each month, they also take part in a 'No Pens Maths Day' where they solve problems and reason practically.						



Knowledge	At Fieldhead Carr Primary School, we recognise that our children need to be confident and fluent across each yearly objective in order for						
	them to progress to deeper and more complex problems. To ensure our pupils acquire this deeper understanding, we follow the White						
	Rose Maths Hub schemes of learning.						
	The White Rose Maths Hub schemes of learning break down each National Curriculum objective into fluency, reasoning and problem						
	solving and we use the learning challenges to teach for mastery – which extends and deepens the understanding of pupils within each						
	year group. Our teachers also use a range of other high quality resources such as the NCETM to further stretch and challenge all learners						
	within the classroom. We use KIRFs (Key Instant Recall Facts' tailored to each year group's objectives to ensure our children are fluent in						
	their recall facts.						
Assessment and rec	ssessment and recording for long term knowledge retention:						
Frader - Annal - Athan - In a	signing a new with far eventee (Direct Value). The Whiterees Matheman angulators and he significants and the first lessen recomming and						

Entry task: When beginning a new unit, for example, 'Place Value'. The Whiterose Maths small steps enable children to spend the first lessons recapping and consolidating learning from the previous year. This enables teachers to assess if the children have the pre-requisite knowledge to progress to new learning or if they need to spend time consolidating and embedding prior knowledge.

Exit task: Children complete a post unit assessment after each unit taught.

**Recording for revisiting:** Children use the document 'Flashback 4' to review prior learning 2/3 times a week.

Summary of Progression							
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
Place Value: Counting							
<ul> <li>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</li> <li>Count numbers to 100 in numerals; count in multiples of 2s, 5s, and 10s.</li> <li>Autumn 1 Spring 1 Spring 3</li> </ul>	Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.      Autumn 1	Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number. Autumn 1 Autumn 3	Count in multiples of 6,7,9, 25 and 1000.     Count backwards through 0 to include negative numbers.     Autumn 1 Autumn 4	<ul> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 100 000.</li> <li>Count forwards and backwards with positive and negative whole numbers, including through 0.</li> </ul>			
Summer 4		Place Value: R	 	Summer 4			
<ul> <li>Identify and represent numbers using objects and pictorial representations</li> <li>Read and write numbers to 100 in numerals</li> <li>Read and write numbers from 1 to 20 in numerals and words.</li> <li>Autumn 1 Spring 1 Spring 3</li> </ul>	<ul> <li>Read and write numbers to at least 100 in numerals and in words.</li> <li>Identify, represent and estimate numbers using different representations, including the</li> </ul>	Identify, represent and estimate numbers using different representations.     Read and write numbers up to 1000 in numerals and in words.     Autumn 1	<ul> <li>Identify, represent and estimate numbers using different representations.</li> <li>Read Roman numerals to 100(I to C) and know that over time, the numeral system chances to include the concept of 0 and place value.</li> </ul>	<ul> <li>Read, write (order and compare) numbers to at least 1 000 000 and determine the value of each digit</li> <li>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>	Read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit.     Autumn 1		
Summer 4	number line.		Autumn 1	Autumn 1			



	Autumn 1				
		Place Value: Use PV	and Compare	·	·
Given a number identify one more and one less.     Autumn 1     Spring 1     Spring 3     Summer 4	<ul> <li>Recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs.</li> </ul>	<ul> <li>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>Compare and order numbers up to 1000.</li> <li>Autumn 1</li> </ul>	<ul> <li>Find 1000 more or less than a given number</li> <li>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones)</li> <li>Order and compare numbers beyond 1000.</li> </ul>	(read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit.     Autumn 1	(read, write) order and compare numbers up to 10 000 000 and determine the value of each digit.     Autumn 1
			Autumn 1		
		Place Value: Problem	is and Rounding		
	Use place value and number facts to solve problems.     Autumn 1	• Solve number problems and practical problems involving these ideas Autumn 1	<ul> <li>Round any number to the nearest 10, 100, or 1000.</li> <li>Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</li> <li>Autumn 1</li> </ul>	<ul> <li>Interpret negative numbers in context.</li> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000 10 00 and 100 00</li> <li>Solve number problems and practical problems that involve all of the above.</li> </ul>	<ul> <li>Round any whole number to a required degree of accuracy.</li> <li>Use negative numbers in context, and calculate intervals across zero.</li> <li>Solve number and practical problems that involve all of the above.</li> </ul>
		Addition and Subtract	ion: Calculations		
Add and subtract one-digit and two-digit numbers to 20, including 0.      Autumn 2     Spring 2	Add and subtract numbers using concrete objects, pictorial representations and mentally including: • A two-digit number and ones. • A two-digit number and tens. • Two two-digit numbers • Adding three one- digit numbers.	<ul> <li>Add and subtract numbers mentally, including:</li> <li>A three-digit number and ones.</li> <li>A three-digit number and tens.</li> <li>A three-digit number and tens.</li> <li>A three-digit number and hundreds.</li> <li>Add and subtract numbers with up to three digits, using formal written methods of</li> </ul>	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Autumn 2	<ul> <li>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</li> <li>Add and subtract numbers mentally with increasingly large numbers.</li> </ul>	<ul> <li>Perform mental calculations, including with mixed operations and large numbers.</li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations.</li> </ul> Autumn 2



<ul> <li>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7=  ?</li> <li>Autumn 2</li> </ul>	A Solve problems with addition and subtraction: • Using concrete objects and pictorial representations, including those involving numbers, quantities and measures	columnar addition and subtraction. Autumn 2 ddition and Subtractic • Solve problems including missing number problems, using number facts, place values, and more complex addition and subtraction.	<ul> <li>Solve Problems</li> <li>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>	<ul> <li>Solve addition and subtraction multi-step problems in connects deciding which operation and methods to use and why.</li> <li>Solve problems involving addition and subtraction, multiplication and</li> </ul>	Solve addition and subtraction multi-step problems in contexts, deciding which operation and methods to use and why.     Autumn 2
spring 2	<ul> <li>Applying their increasing knowledge of mental and written methods.</li> <li>Autumn 2</li> </ul>	Autumn 2		division and a combination of these, including understanding the meaning of the equals sign. Autumn 2	
 		Multiplication and Divi	sion: Recall / Use		-
	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables including: • Recognising odd and even numbers. • Show that multiplication can be done in any order (commutative) and division of one number by another cannot. Spring 2	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.     Autumn 3 Spring 1	Recall multiplication and division facts for multiplication tables up to 12x12 Use place value, known and derived facts to multiply and divide mentally, including: • multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations. Autumn 4 Spring 1	<ul> <li>Identify multiples and factors including finding all factor pairs of a number, and common factors of two numbers.</li> <li>Know and use the vocabulary of prime number, prime factors and composite (non- prime) numbers.</li> <li>Establish whether a number up to 100 is a prime and recall prime numbers up to 19.</li> <li>Recognise and use square numbers and cube numbers and the notation for squared and cubed.</li> </ul>	<ul> <li>Identify common factors, common multiples and prime numbers.</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</li> </ul>



				Autumn 3	
		Multiplication and Divis	sion: Calculations		
	• Calculate	Write and calculate	<ul> <li>Multiply two-digit and</li> </ul>	• Multiply numbers up to 4	<ul> <li>Multiply multi-digit</li> </ul>
	mathematical	mathematical	three-digit numbers by a	digits by a one or two-digit	numbers up to 4 digits
	statements for	statements for	one-digit number using	number using a formal	by a two-digit whole
	multiplication and	multiplication and	formal written layout.	written method, including	number using the formal
	division within the	division using the		long multiplication for	written method of long
	multiplication tables	multiplication tables	Spring 1	two-digit numbers.	multiplication
	and write them using	that they know,		<ul> <li>Multiply and divide</li> </ul>	• Divide numbers up to 4
	the multiplication (x)	including for two-digit		numbers mentally drawing	digits by a two-digit
	and division (÷) and	numbers, using mental		upon known facts.	number using the formal
	equals (=) signs,	and progressing to		• Divide numbers up to 4	written method of long
		formal written methods.		digits by a one-digit	division, and interpret
	Spring 2			number using the formal	remainders, fractions, or
		Autumn 3		written method of short	by rounding, as
		Spring 1		division and interpret	appropriate for the
				remainders appropriately	context.
				for the context.	• Divide numbers up to 4
				<ul> <li>Multiply and divide whole</li> </ul>	digits by a two-digit
				numbers and those	number using the formal
				involving decimals by 10,	written method of short
				100, 1000.	division where
					appropriate,
				Autumn 3	interpreting remainders
				Spring 1	according to the
					context.
					<ul> <li>Perform mental</li> </ul>
					calculations, including
					with mixed operations
					and large numbers.
					Autumn 2
	M	ultiplication and Divisi	on: Solve Problems		
Solve one-step problems	• Solve problems	<ul> <li>Solve problems</li> </ul>	Solve problems involving	• Solve problems involving	<ul> <li>Solve problems involving</li> </ul>
involving multiplication and	d involving	including missing	multiplying and adding,	multiplying and division	addition, subtraction,
division, by calculating the	multiplication and	number problems,	including using distributive	including using their	multiplication and
answer using concrete obje	ects, division, using	involving multiplication	law to multiply two digit	knowledge of factors and	division.
pictorial representations ar	nd materials, arrays,	and division, including	numbers by one digit,		



arrays with the support of the teacher. Summer 1	repeated addition, mental methods, and multiplication and division facts, including problems in contexts. <b>Spring 2</b>	positive integer scaling problems and correspondence problems in which n objects and connected to m objects. <b>Spring 1</b>	integer scaling problems and harder correspondence problems such as n objects are connected to m objects. <b>Spring 1</b>	<ul> <li>multiples, squares and cubes.</li> <li>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> <li>Autumn 3 Spring 1</li> </ul>	Autumn 2
	Multip	lication and Division:	Combined Operations	· · · · · · · · · · · · · · · · · · ·	·
				• Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	• Use their knowledge of the order of operations to carry about calculation involving the four operations. Autumn 2
				Spring 1	
		Fractions: Recogni	se and Write		
<ul> <li>Recognise, find and name a half as one of two equal parts of an object, shape or quantity.</li> <li>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</li> <li>Summer 2</li> </ul>	<ul> <li>Recognise, find name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape set of objects or a quantity.</li> <li>Summer 1</li> </ul>	<ul> <li>Count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.</li> <li>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</li> <li>Recognise and use fractions as numbers:</li> </ul>	• Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Spring 4 Summer 1	<ul> <li>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements &gt; 1 as a mixed number (for example, 1/5 + 4/5 = 6/5 = 1 1/5).</li> </ul>	



				C					
		unit fractions and non-		Summer I					
		unit fractions with small							
		denominators .							
		Spring 3							
Fractions: Compare									
•	Recognise the	<ul> <li>Recognise and show</li> </ul>	<ul> <li>Recognise and show using</li> </ul>	<ul> <li>Compare and order</li> </ul>	• Use common factors to				
	equivalence of 2/4	using diagrams,	diagrams, families of	fractions whose	simplify fractions; use				
	and 1/2	equivalent fractions with	common equivalent	denominators are all	common multiples to				
		small denominators	fractions	multiples of the same	express fractions in the				
	Summer 1	Compare and order unit		number	same denomination.				
	Johnner I	fractions and fractions	Spring 3	indifficer.	Compare and order				
		with the same		A h	fractions including				
				Autumn 4	fractions, including				
		denominators.			fractions >1.				
		Spring 3			Autumn 3				
		Fractions: Cal	culations		Autominio				
				• Add and subtrast frastions	• Add and subtrast				
•	write simple fractions	• Add and subtract	Add and subtract fractions		• Add and subtract				
	for example, $\frac{1}{2}$ of 6 =	fractions with the same	with the same denominator.	with the same	fractions with different				
	3.	denominator within one		denominator and	denominators and				
		whole (for example. 5/7		denominations that are	mixed numbers, using				
		+ 1/7 = 6/7)		multiples of the same	the concept of				
	Summer 1			number.	equivalent fractions.				
	Juliner	Summer 1	Spring 3	<ul> <li>Multiply proper fractions</li> </ul>	<ul> <li>Multiply simple pairs of</li> </ul>				
				and mixed numbers by	proper fractions, writing				
				whole numbers.	the answer in its				
				supported by materials	simplest form (for				
				and diagrams	example, $1/4 \times 2/4 =$				
					1/8				
					Divide proper fractions				
				Autumn 4	Divide proper fractions				
				Spring 2	by whole numbers (lor				
					example. $1/3 \div 2 = 1/6$ ).				
					Aut				
					Autumn 3				
		Eractions: Salva	Problems	<u> </u>	AUIUIIIII 4				
		• Solve problems that	Solve problems involving						
		· some problems that	increasingly harder freeting						
		involve all of the above.	increasingly narder fractions						
			to calculate quantities, and						
		Spring 3	Tractions to divide						

love to learn								
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	Summer 1	quantities, including non-		
		unit fractions where the		
		answer is a whole number.		
		Spring 3		
	Decimals: Recognise,	Write, Compare		
		<ul> <li>Recognise and write decimal</li> </ul>	<ul> <li>Read and write decimal</li> </ul>	<ul> <li>Identify the value of</li> </ul>
		equivalents of any number	numbers as fractions for	each digit in numbers
		of tenths or hundredths.	example, 0.71 = 71/100	given to three decimal
		<ul> <li>Recognise and write decimal</li> </ul>	<ul> <li>Recognise and use</li> </ul>	places.
		equivalents to ¼, ½, 3/4.	thousandths and relate	
		<ul> <li>Round decimals with one</li> </ul>	them to tenths,	Spring 3
		decimal place to the nearest	hundredths and decimal	
		whole number.	equivalents.	
		<ul> <li>Compare numbers with the</li> </ul>	<ul> <li>Round decimals with two</li> </ul>	
		same number of decimal	decimal places to the	
		places up to two decimal	nearest whole number	
		places.	and to one decimal place.	
		Spring 4	<ul> <li>Read, write, order and</li> </ul>	
		Summer 1	compare numbers with up	
			to three decimal places.	
			Spring 3	
	Fuellier Desired		Summer 3	
	Fractions, Decimais a	nd Percentages	December the memory t	
		• Solve simple measure and	• Recognise the percent	Associate a fraction with
		money problems involving	symbol (%) and	division and calculate
		tractions and decimals to	understand that percent	decimal fraction
		two decimal places.	related to number of	equivalents (for
			parts per nundred , and	example, 0.375 for a
		Spring 3	fraction with donominator	simple fraction (for
		Spring 4	100 and as a desimal	example 3/8).
		Sommeri	• Colvo problems which	• Necdii anu use
			• Solve problems which	equivalences between
			norcontage and decimal	decimals and
			percentage and decimal $\frac{1}{1}$	nercontagos including
			2/E $4/E$ and these	in different contexts
			2/3, 4/3 driu triose	in unterent contexts.
				Spring 3
				Spring 3



			denominator of a multiple	Spring 4				
			of 10 or 25.					
			Spring 3					
Ratio and Proportion								
				<ul> <li>Solve problems involving</li> </ul>				
				the relative sizes of two				
				quantities where				
				missing values can be				
				found by using integer				
				multiplication and				
				division facts.				
				<ul> <li>Solve problems involving</li> </ul>				
				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.				
				<ul> <li>Solve problems involving</li> </ul>				
				unequal sharing and				
				grouping using				
				knowledge of fractions				
				and multiples.				
				Spring 1				
		ra		1A .				
• Solve one-step problems that • Recognise and	use the Solve problems.			• Use simple formulae				
involve addition and subtraction. inverse relation	nship including missing			• Generate and describe				
using concrete objects and between addit.	ion and number problems.			sequences				
pictorial representations, and subtraction an	d use			• Express missing number				
missing number problems such this to check				problems algebraically				
as 7 = -9 calculations ar	nd solve							
	er							
problems.								



• Note – ( starts n	aithough formal algebraic i	notation is not introduced u by the 'missing number' obj	ntil Y6, algebraic thinking ectives from Y1/2/3 Measurement: Usi	ng Measures		<ul> <li>Find pairs of numbers that satisfy an equation with two unknowns.</li> <li>Enumerate possibilities of combinations of two variables.</li> <li>Spring 2</li> </ul>
Compare practical • Lengths • Mass/w volume • Time Measure following • Lengths • Mass/w • Capacit • time	, describe and solve problems for: ; and heights reight Capacity and and begin to record the : ; and heights reight y and volume <b>Spring 4</b> <b>Spring 5</b> <b>Summer 6</b>	<ul> <li>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g), temperature ( C), capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.</li> <li>Compare and order lengths, mass, volume/capacity and record the results using &gt;,&lt; and =. Spring 3 Spring 4</li> </ul>	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g), volume/capacity (l/ml). Spring 2 Spring 4	<ul> <li>Convert between different units of measure (for example, kilometre to metre; hour to minute)</li> <li>Estimate, compare and calculate different measures.</li> <li>Spring 2 Spring 4</li> </ul>	<ul> <li>Convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).</li> <li>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</li> <li>Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.</li> <li>Spring 4 Summer 5 Summer 6</li> </ul>	<ul> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.</li> <li>Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.</li> <li>Convert between miles and kilometres.</li> </ul>
		•	Measurement	t: Money		
Recogn of differ coins ar	ise and know the value rent denominations of nd notes. Summer 5	<ul> <li>Recognise and use symbols for pounds (£) and pence (p); combine different amounts to make a</li> </ul>	• Add and subtract amounts of money to give change, using both £ and p in practical contexts.	• Estimate, compare and calculate different measures, including money in pounds and pence.	• Use all four operations to solve problems involving measure (for example, money).	



	• Find different	Summer 2			
	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.				
	, , , , , , , , , , , , , , , , , , ,				
	Spring 1				
 -	-	Measuremer	<u>nt: Time</u>		
<ul> <li>Sequence events in</li> </ul>	<ul> <li>Compare and</li> </ul>	<ul> <li>Tell and write the time</li> </ul>	<ul> <li>Read, write and convert</li> </ul>	<ul> <li>Solve problems involving</li> </ul>	<ul> <li>Use, read write ad</li> </ul>
chronological order using	sequence intervals of	from an analogue clock,	between analogue and	converting between units	convert between
language (for example, before,	time.	including using Roman	digital 12- and 24-hour	of time.	standard units,
and after, next, first, today,	<ul> <li>Tell and write the time</li> </ul>	numerals from I to XII,	clocks.		converting
yesterday, tomorrow, morning,	to five minutes,	and 12-hour and 24-	<ul> <li>Solve problems involving</li> </ul>	Summer 5	measurements of time
afternoon and evening)	including quarter	hour clocks.	converting from hours to		from a smaller unit of
<ul> <li>Recognise and use language</li> </ul>	past/to the hour and	<ul> <li>Estimate and read time</li> </ul>	minutes; minutes to		measure to a larger unit,
relating to dates, including days	draw the hands on a	with increasing accuracy	seconds; years to months;		and vice versa.
of the week, weeks, months and	clock face to show	to the nearest minute,	weeks to days.		
years.	these times.	record and compare			<b>Note</b> – In the WRM
<ul> <li>Tell the times to the hour and</li> </ul>	<ul> <li>Know the number of</li> </ul>	time in terms of	Summer 3		schemes, time
half past the hour and draw the	minutes in an hour	seconds, minutes and			conversions are covered
hands on a clock face to show	and number of hours	hours; use vocabulary			in Y5; the Y6 block
these times.	in a day.	such as o'clock,			concentrates on metric
		a.m/p.m, morning,			units.
Summer 6	Summer 2	afternoon, noon and			
		midnight.			
		<ul> <li>Know the number of</li> </ul>			Autumn 5
		seconds in a minute and			
		the number of days in			
		each month, year and			
		leap year.			
		<ul> <li>Compare durations of</li> </ul>			
		events (for example to			
		calculate the time taken			



		by particular events or			
		tasks).			
		Summer 3			
	Me	easurement: Perimeter	r, Area and Volume		
		• Measure the perimeter	<ul> <li>Measure and calculate the</li> </ul>	• Measure and calculate the	<ul> <li>Recognise that shapes</li> </ul>
		of simple 2-D shapes.	perimeter of a rectilinear	perimeter of composite	with the same areas can
			figure (including squares) in	rectilinear shapes in	have different
			centimetres and metres.	centimetres and metres.	perimeters and vice
		Spring 2	<ul> <li>Find the area of rectilinear</li> </ul>	<ul> <li>Calculate and compare</li> </ul>	versa.
		sping z	shapes by counting squares.	the area of rectangles	<ul> <li>Recognise when it is</li> </ul>
				(including squares), and	possible to use formulae
			Autumn 3	including using standard	for area and volume of
			Spring 2	units, square centimetres	shapes.
				(cm2) and square metres	<ul> <li>Calculate the area of</li> </ul>
				(m2) and estimate the	parallelograms and
				area of irregular shapes.	triangles.
				<ul> <li>Estimate volume [for</li> </ul>	<ul> <li>Calculate, estimate and</li> </ul>
				example, using 1cm3	compare volume of
				blocks to build cuboids	cubes and cuboids using
				(including cubes)] and	standard units including
				capacity [for example,	cubic centimetres (cm3)
				using waster].	and cubic metres (m3),
				Spring 4	
				Summer 6	units.
					Spring 5
 		Geometry: 2D	<u>Shapes</u>		
• Recognise and name common 2-	<ul> <li>Identify and describe</li> </ul>	• Draw 2-D shapes	<ul> <li>Compare and classify</li> </ul>	<ul> <li>Distinguish between</li> </ul>	<ul> <li>Draw 2-D shapes using</li> </ul>
D shapes (for example,	the properties of 2-D		geometric shapes, including	regular and irregular	given dimensions and
rectangles (including squares),	shapes, including the	Summer 4	quadrilaterals and triangles,	polygons based on	angles.
circles and triangles).	number of sides and		based on their properties	reasoning about equal	<ul> <li>Compare and classify</li> </ul>
	line symmetry in a		and sizes.	sides and angles.	geometric shapes based
Autumn 3	vertical line.		• Identify lines of symmetry in	• Use the properties of	on their properties and
	<ul> <li>Identify 2-D shapes on</li> </ul>		2-D shapes presented in	rectangles to deduce	sizes.
	the surface of 3-D		different orientations.	related facts and find	<ul> <li>Illustrate and name</li> </ul>
	shapes, [tor example,			missing lengths and	parts of circles including
	a circle on a cylinder		Summer 4	angles.	radius, diameter and



	and a triangle on a pyramid]. • Compare and sort common 2-D shape and everyday objec Autumn 3	·s ts.		Summer 1	circumference and know that the diameter is twice the radius. Summer 1
		Geometry: 3	) Shapes		
• Recognise and name D shapes (for examp (including cubes), py spheres). Autumn 3	<ul> <li>common 3-</li> <li>Recognise and nam common 3-D shape (for example, cubo (including cubes). Pyramids and spheres].</li> <li>Compare and sort common 3-D shape and everyday object</li> </ul>	<ul> <li>Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.</li> <li>Summer 4</li> </ul>		<ul> <li>Identify 3-D shapes including cubes and other cuboids, from 2-D representations.</li> <li>Summer 1</li> </ul>	<ul> <li>Recognise, describe and build simple 3-D shapes, including making nets.</li> <li>Summer 1</li> </ul>
		Geometry: Angle	es and Lines	I	
		<ul> <li>Recognise angles as a property of shapes or a description of a turn.</li> <li>Identify right angles, recognise that two right angles make up a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.</li> <li>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> </ul>	<ul> <li>Identify acute and obtuse angles and compare and order angles up to two right angles by size Identify lines of symmetry in 2-D shapes presented in different orientations.</li> <li>Complete a simple symmetric figure with respect to a specific line of symmetry.</li> </ul> Summer 4	<ul> <li>Know angles are measures in degrees: estimate and compare acute, obtuse and reflex angles.</li> <li>Draw given angles, and measure them in degrees.</li> <li>Identify:</li> <li>Angles at a point and one whole turn (total 360) Angles at a point on a straight line and ½ a turn (total 180).</li> <li>Other multiples of 90.</li> </ul>	<ul> <li>Find unknown angles in any triangles, quadrilaterals, and regular polygons.</li> <li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> <li>Summer 1</li> </ul>



		Geometry: Position	and Direction		
Describe position, direction and movement, including whole, half, quarter and three-quarter turns.     Summer 3	<ul> <li>Order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>Use mathematical</li> </ul>		<ul> <li>Describe positions on a 2-D grid as coordinates in a first quadrant.</li> <li>Describe movements between positions as translations of a given unit</li> </ul>	<ul> <li>Identify, describe and represent the position of a shapes following a reflection or translation, using the appropriate language, and know that</li> </ul>	<ul> <li>Describe positions on the full coordinate grid (all four quadrants).</li> <li>Draw and translate simple shapes on the coordinate plane, and</li> </ul>
	vocabulary to describe position, direction and movement, including movements in a		to the left/right and up/down. • Plot specified points and draw sides to complete a	the shape has not changed.	reflect them in the axes.
	straight line an distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti- clockwise).		given polygon.	Summer 2	Summer 2
	Summer 4	Charlielies: Dresent			
	a lutanunat an d		and interpret		- Internet and an etwart
	construct simple pictograms, tally charts, block diagrams	data using bar charts, pictograms and tables.	discrete and continuous data using appropriate graphical methods, including	interpret information in tables, including timetables.	pie charts and line graphs and use these to solve problems.
	and simple tables. Summer 3	Summer 5	bar charts and time graphs. Summer 5	Spring 5	Spring 6
		Statistics: Solve	Problems		
	• Ask and answer simple questions by counting the number of objects	• Solve one-step and two- step questions [for example, 'How many	<ul> <li>Solve comparison sum and difference problems using information presented in</li> </ul>	<ul> <li>Solve comparison, sum and different problems using information</li> </ul>	• Calculate and interpret the mean as an average.
	in each category and sorting the categories by quantity.	more?' and 'How many fewer?'] using information presented	bar charts, pictograms, tables and other graphs.	presented in a line graph. <b>Spring 5</b>	Spring 6
	<ul> <li>Ask and answer questions about totalling and</li> </ul>	in scared bar charts and pictograms and tables.	Summer 5		



	comparing categorical	Summer 5		
	data.			
	Summer 3			

	Coverage Overview								
Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2			
FS1	<ul> <li>Number rhymes and songs</li> <li>Categorising and sorting</li> <li>Same/ different</li> <li>Pattern</li> <li>Subitising 1-3</li> <li>Capacity</li> </ul>	<ul> <li>Same/ different</li> <li>Numbers 1 &amp;2</li> <li>Counting 1-1</li> <li>Comparing length</li> <li>Pattern</li> <li>shape pictures</li> </ul>	<ul> <li>Language of size</li> <li>Comparing quantities</li> <li>Numbers 3&amp; 4</li> <li>Exploring &amp; comparing weight</li> <li>Subitising 1-4</li> </ul>	•Numbers 5& 6 •Counting objects 1-1 and showing amounts on fingers to 5 •Subitising 1-5 •Pattern ABAB with images/ colours Time	Comparing quantities     Mathematical graphics     shape	<ul> <li>Positional language</li> <li>Compare quantities</li> <li>Mathematical representation</li> <li>Pattern –with shapes</li> </ul>			
FS2	<ul> <li>Match and sort</li> <li>Compare amounts</li> <li>Compare size, mass and capacity</li> <li>Exploring pattern (AB)</li> </ul>	<ul> <li>Representing 1,2,3</li> <li>Comparing 1,2,3</li> <li>Composition of 1,2,3</li> <li>Circles and triangles</li> <li>Positional language</li> <li>Representing numbers to 5</li> <li>One more or one less to 5</li> <li>Shapes with four sides</li> <li>Time</li> </ul>	<ul> <li>Introducing zero</li> <li>Comparing numbers to</li> <li>Composition of 4&amp;5</li> <li>Compare mass</li> <li>Compare capacity</li> <li>Numbers 6,7 &amp;8</li> <li>Combining two amounts</li> <li>Making pairs</li> <li>Length and height</li> <li>Time</li> </ul>	<ul> <li>Counting to 9&amp;10</li> <li>Comparing numbers to 10</li> <li>Number bonds to 10</li> <li>3-D shapes spatial awareness</li> <li>Patterns (AAB,ABB)</li> </ul>	<ul> <li>Build numbers beyond</li> <li>Counting patterns</li> <li>beyond 10</li> <li>Spatial reasoning</li> <li>Match, rotate and</li> <li>manipulate shapes</li> <li>Addition</li> <li>Subtraction</li> <li>Spatial reasoning - compose and</li> <li>decompose</li> </ul>	<ul> <li>Doubling</li> <li>Sharing and grouping</li> <li>Even and odd</li> <li>Spatial reasoning- visualise and build</li> <li>Patterns and relationships</li> <li>Spatial mapping</li> </ul>			
Year 1	• Number: Place Value (within 10)	<ul> <li>Number: Addition and Subtraction (within 10)</li> <li>Geometry: Shape</li> <li>Consolidation</li> </ul>	<ul> <li>Number: Place Value (within 20)</li> <li>Number: Addition and Subtraction (within 20)</li> </ul>	<ul> <li>Number: Place Value (within 50)</li> <li>Measurement: Length and Height</li> <li>Measurement: Mass and Volume</li> </ul>	<ul> <li>Number: Multiplication and Division</li> <li>Number: Fractions</li> <li>Geometry: Position and Direction</li> </ul>	<ul> <li>Number: Place Value (within 100)</li> <li>Measurement: Money</li> <li>Measurement: Time</li> <li>Consolidation</li> </ul>			
Year 2	<ul> <li>Number: Place Value</li> <li>Number: Addition and Subtraction</li> </ul>	<ul> <li>Number: Addition and Subtraction</li> <li>Geometry: Shape</li> </ul>	Measurement: Money	<ul> <li>Measurement: Length and Height</li> </ul>	<ul><li>Number: Fractions</li><li>Measurement: Time</li></ul>	<ul> <li>Statistics</li> <li>Geometry: Position and Direction</li> </ul>			



				Measurement: Mass, Capacity and Temperature		Consolidation		
			FS1					
Autumn 1	Autumn	2 S	pring 1	Spring 2	Summer 1	Summer 2		
	Number							
<ul> <li>Recite numbers past 5 usings and rhymes</li> <li>Subitise to 3.</li> </ul>	<ul> <li>Learn to count meaningfully using correspondence (nu 5).</li> <li>Recognise when c of similar things are Begin to develop a understanding of nu 5 – number studies</li> </ul>	<ul> <li>To answer questions us numbers to number coult number to number coult number to number to</li></ul>	<ul> <li>'how many'</li> <li>sing the last</li> <li>inted.</li> <li>when quantities</li> <li>things are equal.</li> <li>5</li> </ul>	To count out objects from a group (up to 5). Show 'finger numbers' up to 5. Continue to develop a deep understanding of numbers to 5 & 6 – number studies.	<ul> <li>To learn and use the language 'more than' 'less/fewer than' correctly.</li> <li>Learn to solve real world problems with numbers up to 5 (adding, sharing, subtracting).</li> </ul>	<ul> <li>Learning to make marks to represent number.</li> <li>Learn to solve real world problems with numbers up to 5 (adding, sharing, subtracting).</li> </ul>		
		I	Numerical P	Patterns				
<ul> <li>Measure <ul> <li>Capacity – learn to identify and empty.</li> <li>Identify objects relating size – big, small etc.</li> </ul> </li> <li>Describe the sequence events in nursery using a visual timetable.</li> <li>Shape <ul> <li>Select shapes appropriate during play – e.g. flat surfaces for building, a triangular prism for a rootetc.</li> <li>Talk about and recognist patterns in the environmeted of the environmeted o</li></ul></li></ul>	tify Measure • Identify objects re- length – long, short to Shape • Create pictures w shapes/objects repr of unique role. • Follow ABAB patter movement and acti • To sort objects int different groups. f e ent. und	elating to elating to etc. here resent a to bions. to corners, si curved. <b>Measure</b> • Use langua objects relat • Explore an	age to compare ting to capacity. Djects relating to avy, light etc. age to compare ting to size. Ad describe shapes ematical language ides, straight,	Measure • Link numerals and amounts. Fime • To describe a sequence of events from their daily routine. (T4W planting.) Position • To describe a familiar routes - recall the route and the order of things seen on the way.	<ul> <li>Measure <ul> <li>To use language to compare objects relating to length.</li> </ul> </li> <li>Time <ul> <li>To describe a sequence of events from a familiar story.</li> <li>(T4W input)</li> </ul> </li> <li>Shapes <ul> <li>Explore and describe shapes using mathematical language, faces, flat, curved, straight, solid, point.</li> </ul> </li> </ul>	<ul> <li>Measure <ul> <li>Use language to compare objects relating to weight.</li> </ul> </li> <li>Shape <ul> <li>Create ABAB patterns using 2D shapes.</li> </ul> </li> <li>Position <ul> <li>To use correct positional language to describe route and locations – in, on, under, behind, in front, behind, in front, next to, on top, inside.</li> </ul> </li> </ul>		



FS2									
Number									
<ul> <li>Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').</li> <li>Recite numbers past 5</li> <li>Say one number for each item in order: 1,2,3</li> <li>Know that the last number reached when counting a small set of objects tells you how many there are in total up to 3 ('cardinal principle')</li> <li>Show 'finger numbers' up to 3</li> <li>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 3</li> <li>Experiment with their own symbols and marks as well as numerals.</li> <li>Necite numbers to 5</li> <li>Recite numbers to 5</li> <li>Say one number for each item in order: 1,2,3,4,5</li> <li>Know that the last number reached when counting a small set of objects tells you how many there are in total up to 3 ('cardinal principle')</li> <li>Show 'finger numbers' up to 3</li> <li>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 3</li> <li>Experiment with their own symbols and marks as well as numerals.</li> <li>Compare quantities using language: 'more than', 'fewer than'.</li> <li>Recite numbers to 5</li> <li>Recite number to 5</li> <li>Recite number to 5</li> <li>Recite number say one number for each item in order: 1,2,3,4,5</li> <li>Know that the last number reached when counting a small set of objects tolly out to 5</li> <li>Recite number reached when counting a sounds</li> <li>Show 'finger numbers' up to 5</li> <li>Compare quantities using language: 'more than', 'fewer</li> </ul>		<ul> <li>Recite number to 8</li> <li>Say one number for each item in order: up to 8</li> <li>Count objects, actions and sounds</li> <li>Subitise</li> <li>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 8</li> <li>Explore the composition of 6,7,8</li> <li>Compare two amounts up to 8</li> <li>Understand the 'one more than/one less than' relationship between consecutive numbers to 8.</li> </ul>	<ul> <li>Recite numbers to 10</li> <li>Say one number for each item in order: up to 10</li> <li>Count objects, actions and sounds</li> <li>Subitise</li> <li>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 10</li> <li>Explore the composition of 9&amp;10</li> <li>Compare 9&amp;10</li> <li>Understand the 'one more than/one less than' relationship between consecutive numbers to 10</li> </ul>	<ul> <li>Recite numbers beyond 10</li> <li>To begin to recognise a teen number is 1 ten and ones.</li> <li>To recognise all number bonds to 10.</li> <li>To add 2 groups together to make a total.</li> <li>To subitise using 9 and 10.</li> <li>To recognise patterns in numbers beyond 20.</li> <li>To identify odd and even numbers.</li> </ul>	<ul> <li>Automatically recall some number bonds to 10.</li> <li>To become confident in doubling numbers to 10.</li> <li>To become confident in halving numbers to 10.</li> <li>To share amounts into equal groups</li> <li>To explore grouping in numbers (arrays).</li> </ul>				
		Numerica	l Patterns						
Shape •To talk about and explore 2D shapes. •Talk about and identifies the patterns around them •Extend and create AB patterns •Notice an error in a repeating pattern. Measure	<ul> <li>Shape</li> <li>Talk about and explore 2D and 3D shapes.</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>Correct an error in a repeating pattern.</li> </ul>	Measure • Make comparisons between objects relating to size, length, weight and capacity. • To compare the capacity of containers using the correct vocabulary (full, empty, nearly full, nearly empty, half full, half empty and overflowing).	Measure •Make comparisons between objects relating to size, length, height •To compare the length of objects using the correct vocabulary (long, longest, longer, short, shortest, shorter). •To compare height using the correct vocabulary (tall,	<ul> <li>Shape</li> <li>Select, rotate and manipulate shapes in order to develop spatial reasoning skills</li> <li>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</li> </ul>	Shape • Select, rotate and manipulate shapes in order to develop spatial reasoning skills • Continue, copy and create repeating patterns				



•Make comparisons bet objects relating to size, length.	ween Position •To explore position language •Describe a familia •Discuss routes an- begin to use words front of' and 'behin <u>Time</u> •Begin to describe sequence of events fictional, using wor 'first', 'then'	nal r route. d locations, like 'in nd' a s, real or ds such as	tall sho •Tc obj (he ligh	est, taller, short, shortest, orter). o compare the weight of jects using the vocabulary eavy, heavier, heaviest, ht, lighter, lightest).	•To confidently use positional language descriptively.	
Year 3	<ul> <li>Number: Place Value</li> <li>Number: Addition and Subtraction</li> </ul>	<ul> <li>Number: Addition and Subtraction</li> <li>Number: Multiplication and Division (A)</li> </ul>	<ul> <li>Number: Multiplication and Division (B)</li> <li>Measurement: Leng and Perimeter</li> </ul>	Number: Fractions (A Measurement: Mass and Capacity gth	<ul> <li>Number: Fractions (B)</li> <li>Measurement: Money</li> </ul>	<ul> <li>Geometry: Shape</li> <li>Statistics</li> <li>Consolidation</li> </ul>
Year 4	• Number: Place Value Number: Addition and Subtraction	<ul> <li>Measurement: Area</li> <li>Number: Multiplication and Division (A)</li> </ul>	<ul> <li>Number: Multiplication and Division (B)</li> <li>Measurement: Leng and Perimeter</li> </ul>	Number: Fractions     Number: Decimals (A)	<ul> <li>Number: Multiplication and Division (B)</li> <li>Measurement: Money</li> <li>Measurement: Time</li> </ul>	<ul> <li>Consolidation</li> <li>Geometry: Shape</li> <li>Statistics</li> <li>Geometry: Position and Direction</li> </ul>
Year 5	<ul> <li>Number: Place Value</li> <li>Number: Addition and Subtraction</li> </ul>	<ul> <li>Number: Multiplication and Division (A)</li> <li>Number: Fractions (A)</li> </ul>	<ul> <li>Number: Multiplication and Division (B)</li> <li>Number: Fractions (</li> </ul>	<ul> <li>Number: Decimals an Percentages.</li> <li>Measurement: Perimeter and Area</li> <li>Statistics</li> </ul>	<ul> <li>d • Geometry: Shape</li> <li>• Geometry: Position and Direction</li> <li>• Number: Decimals</li> </ul>	<ul> <li>Number: Negative Numbers</li> <li>Measurement: Converting Units.</li> <li>Measurement: Volume</li> </ul>
Year 6	• Number: Place Value Number: Addition, Subtraction, Multiplication and Division	<ul> <li>Number: Fractions (A)</li> <li>Number: Fractions (B)</li> <li>Measurement: Converting Units</li> </ul>	<ul> <li>Number: Ratio</li> <li>Number: Algebra</li> <li>Number: Decimals</li> </ul>	<ul> <li>Number: Fractions, Decimals and Percentages</li> <li>Measurement: Area, Perimeter and Volum</li> <li>Statistics</li> </ul>	Geometry: Shape     Geometry: Position     and Direction	<ul> <li>Themed projects, consolidation and problem solving</li> </ul>