



Year	Autumn 1		Autum	n 2		Spring 1			Spring 2		Summ	er 1		Sumr	ner 2	
Nursery	Talks a Uses shapes wh Using lang	Recite numbe Starts to subitis- out patterns in t n building, thinki age to compare sing position wo	ers to 5 the up to 2 the environment ing about their p size –bigger, sm ords in play	it properties. naller	Uses one number name for each object when counting Show finger numbers to 5 Subitise numbers to 3 and recognise 3 (through different manipulatives) without counting Experiment with symbols and marks and numerals Extending patterns Combines shapes in play to build new models Can use position words to give simple directions			Can count order, recognise and use numbers to 5 Recognises that the last number said represents the told number so far (cardinal principle) To match numerals and their qualities to 5 To compare quantities using the vocabulary of greater, less, more, fewer and the same To compare objects weight, size, length and capacity				inciple) same				
Recepti on	zepti Recite numbers to 10 forward & backward Representing/ comparing/ composition of numbers 1- 5 One more/less Matching objects to 10 Pattern 2D Shape			rd bers 1- 5	Recite numbers to 15 forward & backward Representing/ comparing composition of numbers 1- 10 Making pairs Combing 2 groups (counting them to find the total) Repeating patterns Length/ height/ time 3D Shape			Number bonds to 10 Counting to 20 and beyond Addition and subtraction Doubling/ sharing / grouping Even and odd numbers – deeper understanding patterns and relationships between numbers 10 and beyond Money 2D/3D shapes				nbers 10 and				
1	Number: Place Value (within 10)	Number: A Subtraction (Addition and Within 10)	Geometry: Shape	Number: Place v (within 20)	ralue Numb and s (w	er: Addition subtraction ithin 20)	Number: place value (within 50)	Measur ement: length and height	Measurem ent: mass and volume	Number: Multiplica and Division	tion Number : Fraction s	Geometry: Position and Direction	Number: Place Value (within 100)	Measurem ent: Money	Measure- ment: Time
2	Number: Place Numb Value	er: Addition and	Subtraction	Geometry: shape	Measuremen t: money	Number: m d	nultiplication and livision	d Measur ent: len and hei	em Meas gth mass, ght and to	urement: capacity emperature	Number: fractior	is Measure	ement: time Sta	atistics	Geometry: dire Inves	position and ection tigation
3	Number: Place Numb Value Subtr	er: Addition and ction	Number: M Division A	fultiplication and	Number: multipl division B	lication and	Measur ement: length and perimet er	Number: fractions A	Measure and c	ment: mass apacity	Number: I Fractions B r	Aeasurement: noney	Measuremen Time	nt: Geor	netry: shape	Statistics
4	Number: Place Num Value	er: Addition and Subtraction	d Measurem area	nent: Number: Multiplicat ion and Division A	Number multiplicatior division E	: Me n and leng B per	asurement: gth and imeter	Number: fractions	Numt A	per: Decimals	Number: Decimals B	Measu rement money	Measurement: time	Geometry: shape	Statistics	Geometry: position and direction
5	Number: Number Place Addition a Value Subtractio	Number: d Multiplicat Division A	tion and	Number: fractions A	Number: Multiplication ar Division B	Num nd Fracti	ber: Numl ons B and	per: Decimals Percentages	Measur ement: perimet er and area	Statistics	Geometry: Ge shape Pr Di	ometry: osition and rection	Number: decimals	Number: negative numbers	Measureme nt: converting units	Measureme nt: volume
6	Number Number: A : Place subtrac Value multiplica divisi	Idition, N ion, Fra on and n	lumber: Nur actions A Frac s	mber : iction s B Measurem ent: converting units	Number: Ratio	Number: Algebra	Number: Decimals	Number: fractions, decimals and percentages	Measur ment: ar perimet and volu	e- Stati ea, stics er me	Geometry: Shape	Geometry: position and direction	Themed projec	ts, consolidation	and problem solv	ing





Specialist Small Classes

Within the SSC, the teaching of Maths is heavily adapted to meet the individual needs of each child. The vast majority of our pupils are working below age related expectations for Mathematics. Pupils are placed into smaller groups, allowing them to work alongside children who are accessing the curriculum at the same or similar level. Both teachers and support staff are utilised to lead these smaller groups, although all planning and assessments are carried out by qualified teachers. Weekly planning templates differ slightly from those used within mainstream, to reflect the adaptions made for each child and to provide a comprehensive teaching guide for support staff to follow, allowing for quality first teaching. Plentiful opportunities are provided for pupils to explore Maths through the use of practical resources and hands on activities. Repetition and over-learning are embedded within our approach to Maths. Each lesson begins with the 'fluent in five' starter activity, relating to the year group objectives each child is currently working at. During school assessment week, many of our pupils complete the NTS Maths assessments, however, more informal assessments of children's learning are carried out regularly. To record assessments, B-Squared Connecting Steps is used. This system allows us to track pupil attainment and progress in the form of a percentage of year group objectives met. Gaps in learning can clearly be identified using this system. Within the small classes, all pupils are set one piece of Maths homework each week. For those that are able, this task may be set via MyMaths. Additionally, many of our pupils utilise TT Rockstars.





Mathematics EYFS

At Acre Hall the children can access continuous provision in both the Nursery and Reception classrooms. Continuous provision incorporates all areas of learning and provides children with the opportunity to demonstrate characteristics of effective learning. Children are given the freedom to make independent choices and are encouraged to be active learners and take control of their own learning. We use resources that are open ended to encourage creativity, imagination and high order thinking skills. Within the provision, children are encouraged to participate in math enhancements that link to that days/weeks teaching as part of the subject in focus for that week. We endeavor to cover all relevant mathematics objectives as stated in *'Development Matters (2021)'* throughout the year often progressing the content each term to enable children to meet the Early Learning Goals at the end of reception.

In EYFS, pupils are taught the basics of Maths using our Early Years curriculum for Number, Shape Space and Measures. Aspects of each curriculum area form the foundation of skills and knowledge which link to the Mathematics Curriculum for Key Stage 1 and 2. Maths is taught through a variety of practical adult led and child initiated activities. At Acre Hall in Early Years we take a 'Planning in the moment approach' to promote culture capital and to provide activities that reflect the children's unique interests. This is added to retrospectively throughout the year and maths is incorporated within these interests and explored discretely and/or non-discretely throughout the day. Regular observations and assessments are recorded using an on-line journal called Arc. This information then contributes to a summative assessment at the end of EYFS using the Early Years Outcomes for Number, Shape Space and Measures.

<u>SEN</u>

Using concrete examples can be helpful for children with SEN who may struggle to understand abstract concepts. For example, using manipulatives such as blocks, counters, or other objects can help children understand mathematical concepts such as addition. Teaching is adapted to meet the needs of the children and in some cases children with SEN may be provided with little but often one to one time with the teacher to explore and/or practice concepts taught. Again, math is provided in continuous provision so children are exposed and encouraged to use math skills independently.

Curriculum	Communication & Language				
EYFS development matters	Learn new vocabulary.				
<u>statements</u>	 Ask questions to find out more and to check what has been said to them. 				
	 Articulate their ideas and thoughts in well-formed sentences. 				
	 Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. 				
	• Use new vocabulary in different contexts.				
	Understanding the world				
	 Explore collections of materials with similar and/or different properties. 				
	 Talk about what they see, using a wide vocabulary. 				
	• Explore how things work.				
	 Understand the effect of changing seasons on the natural world around them. 				
	Personal, Social and Emotional Development				





	• Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them.
Mat	thematics
	Combine objects like stacking blocks and cups. Put objects inside others and take them out again.
	 Take part in finger rhymes with numbers.
	React to changes of amount in a group of up to three items.
	Compare amounts, saving 'lots' 'more' or 'same'. Develop counting-like behaviour, such as making sounds, pointing or saving some
	numbers in sequence.
	 Develop counting-like behaviour, such as making sounds, pointing or saving some numbers in sequence.
	 Count in everyday contexts, sometimes skipping numbers – '1-2-3-5'.
	 Build with a range of resources.
	Complete inset puzzles.
	 Compare sizes, weights etc. using gesture and language - 'bigger/little/smaller', 'high/low', 'tall', 'heavy'.
	 Notice patterns and arrange things in patterns.
	 Develop fast recognition of up to 3 objects, without having to count them individually ('subitising).
	Recite numbers past 5.
	• Say one number for each item in order: 1.2.3.4.5.
	 Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
	 Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to
	• Experiment with their own symbols and marks as well as numerals.
	 Solve real world mathematical problems with numbers up to 5.
	• Compare quantities using language: 'more than', 'fewer than'.
	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and
	mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.
	 Understand position through words alone – for example, "The bag is under the table," – with no pointing.
	 Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'
	 Make comparisons between objects relating to size, length, weight and capacity.
	 Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.
	 Combine shapes to make new ones – an arch, a bigger triangle, etc.
	 Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper.
	 Use informal language like 'pointy', 'spotty', 'blobs', etc.
	• Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.
	 Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'
	Count objects, actions and sounds
	• Subitise.
	Link the number symbol (numeral) with its cardinal number value.
	Count beyond ten.





	 Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns. Compare length, weight and capacity.
Reception Early Learning Goals	Mathematics Number Children at the expected level of development will: Have a deep understanding of number to 10, including the composition of each number Subitise (recognise quantities without counting) up to 5 Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Numerical Patterns Children at the expected level of development will: Verbally count beyond 20, recognising the pattern of the counting system Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.
Books linked to teaching	 5 Little Ducks The hungry caterpillar 10 Little Monkeys Hickory Dickory Dock Tangled: A Story About Shapes A Trapezoid is Not a Dinosaur! Circle Rolls





Key Stage 1

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Year One

	Autumn	Spring	Summer
NC Links Topic Number: Place Value	 forwards and backwards, beginning with 0 or 1, or from any given number count identify one more and one less identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least read and write numbers from 1 to 10 in numerals and words. 	 read and write numbers from 1 to 10 in numerals and words. Count to 50 Partition up to 50 in tens and ones 	 read and write numbers to 100 in numerals count to and across 100
Topic Number: Addition and Subtraction	 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = -9 	 represent and use number bonds and related subtraction facts within 20 add and subtract one-digit and two-digit numbers to 20, including zero 	





Topic Geometry: Shape	 recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares) circles and triangles] 3-D shapes [for example, cuboids (including cubes), 		 describe position, direction and movement, including whole, half, quarter and three quarter turns.
Position and Direction	pyramids and spheres].		
Measurement: Length and Height		 compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] measure and begin to record the following: lengths and heights 	
Measurement: Mass and Volume		 compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than] capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] measure and begin to record the following: mass/weight capacity and volume 	
Measurement: Money			• recognise and know the value of different denominations of coins and notes compare, describe and solve
Measurement: Time			practical problems for: time (for example, quicker, slower, earlier, later) • measure and begin to record the





			 following: time (hours, minutes, seconds) sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] 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
Number: Multiplication			 solve one-step problems involving multiplication and division, by
and Division			calculating the answer using
			representations and arrays with
Number:		 count in multiples of twos, 	the support of the teacher recognise, find and name a half as one of
Fractions		fives and tens given a number	two equal parts of an object, shape or quantity
			• find and name a quarter as one of four
			equal parts of an object, shape or quantity.
Cross	Science Geography History Computing DT	Science	Science
curricular			
LINKS	Aspirational	rs & Healthy	Clear Global
Driver Links	Learners Explorer	s Advocates C	ommunicators
DIIVEI LIIIKS			





	Crowing independence and			Futies eveloping change and			
	perseverance in answering	for example math	ouzzles in	learn the value of money.	questions	in various ways	others. Learn basic life skills
	kcy questions.				Develop m	Develop mathematical vocabulary.	
Vocabulary	equal to, more than, less than (fewer), most least, greatest, smallest, same, different, sort, groups digit, value, cube, cylinder, cuboid, pyramid, 2d 3d, face, triangles, squares, rectangles Circles, surface		Add, plus, Subtract, take away Part whole, first, then, now bar model, equal to (=), fact families, part-whole model, number bond, pattern, digit, more/greater, less/smaller, double/half mass weight light heavy heavier full/empty more than, less than capacity volume, long/short longer/shorter, tall/short, length, height double/half, measure		half quarter fraction equal whole parts shape object quantity, pence, coin, pound, note value, before after, next, hours/minutes/seconds first, today, yesterday/tomorrow		
Progression	EYFS: Begin to develop a se Play games that invol	nse of the number s ve moving along a n	ystem by verl umbered trac	bally counting forward to and beyo k, and understand that larger num	ond 20, paus ibers are fui	ing at each multiple o ther along the track.	f 10.
Number:	Distribute items fairly	, for example, put 3	marbles in ea	ch bag. Recognise when items are	distributed	unfairly.	
Place Value	Year 2:						
	 Count through the nu 	umber system. Place	value within	100. Compare and order numbers.	Add and su	btract within 100	
	Reason about the loc	ation of larger numb	ers within the	e linear number system. Compare a	and order n	umbers. Read scales. B	egin to experience partitioning
	and combining numb	ers within 10. 1NF–1	L Develop flue litive calculati	ency in addition and subtraction fa-	cts within 10). ition when the columr	sums to less than 10 (no
	regrouping). Subtract	within a column du	ring columna	r subtraction when the minuend or	f the colum	is larger than the sub	itrahend (no exchanging).
	Recall the 2, 5 and 10	multiplication table	s. Carry out r	epeated addition and multiplicatio	n of 2, 5, an	d 10, and divide by 2,	5 and
Numbor:	EYFS:	10. Unitise in tens. I	dentity odd a	na even numbers.			
Addition and	Understand the cardi	nal value of number	words, for ex	ample understanding that 'four' re	elates to 4 o	bjects. Subitise for up	to to 5 items. Automatically
Addition and	show a given number	^r using fingers. mber stories, using r	nictures num	hers and symbols (such as arrows)			
Subtraction	Year 2:						
	Add and subtract wit	hin 10.	h				
	Represent composition and de	composition of num	ibers using eq	uations.			
Geometry:	EYFS:						<i>и</i>
Shano	 See, explore and disc always presented on 	uss models of comm their base).	on 2D and 3D	shapes with varied dimensions ar	ld presented	in different orientatio	ons (for example, triangles not
Shape	 Select, rotate and ma 	nipulate shapes for a	a particular p	urpose, for example: • rotating a c	ylinder so it	can be used to build a	tower • rotating a





Geometry: Position and Direction	 puzzle piece to fit in its place. Year 2: Describe properties of shape. Categorise shapes. Identify similar shapes. Lind the area or values of a compound shape by decomposing into constituent shapes.
Measurement: Length and Height	 Year 2: 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 compare and order lengths, mass, volume/capacity and record the results using >, < and =
Measurement: Weight and Volume	 Year 2: (mass, capacity and temp) 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 compare and order lengths, mass, volume/capacity and record the results using >, < and =
Measurement: Time Measurement: Money	Year 2: • 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 times • know the number of minutes in an hour and the number of hours in a day. • 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
Number: Multiplication and Division	 Year 2: recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs 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, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Number: Fractions	 Year 2: recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.





<u>Year Two</u>

	Autumn	Spring	Summer
NC Links Topic Number: Place Value	 recognise the place value of each digit in a two-digit number (tens, ones) identify, represent and estimate numbers using different representations, including the number line compare and order numbers from 0 up to 100; use <, > and = signs read and write numbers to at least 100 in numerals and in words use place value and number facts to solve problems Partition numbers up to 100 Count in 2, 5, 3 and 10 		
Number: Addition and Subtraction	 solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 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 show that addition of two numbers can be done in any order (commutative) 		
Measurement: Money		 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 	
Number: Multiplication and Division	 recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs 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, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. 	
Statistics		 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





Geometry:	 identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a 	
Properties of	vertical line	
Shape	 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	 order and arrange combinations of mathematical
Geometry:		objects in patterns and sequences
Position and		• use mathematical vocabulary to describe position,
Direction		straight line and distinguishing between rotation as a
Direction		turn and in terms of right angles for quarter half and
		three-quarter turns (clockwise and anticlockwise).
Number:		• recognise, find, name and write fractions 1/3 , 1/4,
Fractions		2/4 and 3/4 of a length, shape, set of objects or
Tractions		quantity
		 write simple fractions for example, 1/2 of 6 = 3
		and recognise the equivalence of 2/4 and 1/2.
		• make equal parts
		recognise a half find a half
		• find a quarter
		• recognise a third
		• find a third
		• unit fractions
Measurement:		 compare and sequence intervals of time
Timo		 tell and write the time to five minutes, including
nine		quarter past/to the hour and draw the hands on a
		clock face to show these times
		 know the number of minutes in an hour and the
		number of hours in a day.





Measurement: Mass, Capacity and Temperature			 estin in any direct temperaturn nearest app scales, ther vessels compare volume/cap using >, < and 	mate ar ction (m re (°C); c propriat momet e and or pacity ar nd =	nd measure length n/cm);mass (kg/g); capacity (litres/ml) ce unit, using rulers ers and measuring der lengths, mass, nd record the resu	/height) to the s, g		
Measurement : Length and Height			 choor stan mea dire tem to th usin and com volu result 	ose and adard ur asure lea ection (n peratur he near ng rulers measur npare ar ume/cap ults usin	I use appropriate nits to estimate an ngth/height in any n/cm); mass (kg/g) re (°C); capacity (lif est appropriate ur s, scales, thermom ring vessels nd order lengths, n pacity and record t	d); tres/ml) hit, eters nass, :he		
Cross curricular Links	Science Geography Com History DT Music PE	puting	Science Geo	ography	/ Computing		Science. Geogra	phy, History, DT
Curriculum Driver Links	Aspirational Learners	Advent Explo	urers & rers		Healthy Advocates	co	Clear ommunicators	Global Citizens





Gain confidence with the number system including using column method to find the answer to subtraction and addition calculations. Orienteering math enrichment attivity outdoors. solving problems. Develop mathematical solving problems. Recognising temperature changes across the seasons Vocabulary place value, number, equal to, greater than/less than, teen, tens/ones, symbol, more/less, compare, tens frame, part-whole, base 10, number bonds, column, total, sum number sentence, add more than addition? '4'; 'take away'; subtract' fact family. '10 more' and '10 less', money' cionis', 'notes'; 'nound's', 'nouted grams', 'noted agrams' and 'table'; 'array'; 'rows', 'lock digrams' and 'table'; 'frary,' 'now'; 'lock digrams' and 'table'; 'frary,' 'now'; 'lock digrams' and 'table'; 'frary,' 'now'; 'lock digrams' and 'tables' 'prism', 'polygor,' pentagon', 'hexagon', 'octagon' and 'hemisphere' vertes', 'vertes', 'quadriateral', 'line of symmetry 'nal' curved surface' equal or 'non-unit 'rativ', 'table', 'tary'; 'now'; 'now', 'digrams', 'line of symmetry 'and 'curved surface' equal or 'non-unit 'rativ', 'table', 'array'; 'now'; 'nore', 'grine', 'gr, 'kg', 'm', 'T, 'eC') Progression Year 1: • Count within 100, forwards and backwards, starting with any number • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number: Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Reason about the location of any three digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number, and read scales/number i
number system including us column method to find the answer to subtraction and addition calculations. activity outdoors. solving problems. vocabulary. vocabulary. changes across the seasons Vocabulary pace value, number, equal to, greater than/less than, teen, tens/ones, symbol, more/less, compare, tens frame, part-whole, base 10, number bonds, column, total, sum number support, 'initiation', 'initiation
wing column method to find the answer to subtraction and addition calculations. understanding of time Vocabulary place value, number, equal to, greater than/less than, teen, tens/ones, symbol, more/less, compare, tens frame, part-whole, base 10, number bonds, column, total, sum number sentence, add more than addition'; '+; 'take away'; 'subtract' fact family', '10 more' and '10 less', money', 'cons', 'notes'; 'pounds £'; 'pence p'; left'; 'bwy'; 'spend'; 'how much'; 'value'; 'total'; equal groups'; 'equal parts'; 'same'; 'different'; 'more table'; 'array'; 'roubing'; 'number in a group'; 'number of groups'; 'times- table'; 'array'; 'roubing'; 'number in a group'; 'number of groups'; 'times- table'; 'array'; 'roubing'; 'number in a group'; 'quadritateral', 'line of 'tables' 'prism'; 'polygon', 'pentagon', 'hexagon', 'nexagon' 'quadritor', 'digrams', 'millilitres', 'litres', 'aremerature', 'thermometer', 'degrees Celsius', 'nottest', 'coldest', 'g', 'kg', 'mi', 'f', '@C') Progression Year 1: • Count within 100, forwards and backwards, starting with any number • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number and Place Value Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.
Ite answer to subtraction and addition calculations. we have to subtraction and addition (second than
addition calculations. equal groups'; 'equal parts'; 'same'; 'different'; 'more clockwise' and 'anti-clockwise' right and left, 24 han/less than, teen, tens, fones, symbol, more/less, compare, tens frame, part-whole, base 10, number bonds, column, total, sum number stabel'; 'array'; 'rows'; 'clotgrams', 'block diagrams' and sentence, add more than addition'; '+'; 'take away'; 'subtract 'fact family', '11 more' and '10 is '10 times', 'pentegon', 'block diagrams' and 'more/subserve', 'quadrilateral', 'line of sess', money', 'cloins'; 'nots'; 'pounds'; 'nome' and '10 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning eases and and the location of any three digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning en Reason about the location of any three digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning ensays and the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 Place Value Year 1: Number: Year 1: Year 3: eccunding in number, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning ensays and ext multiple of 100 and 10 block of 100 into 2, 4, 5 and 10 equal parts, more digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 block of 100 into 2, 4, 5 and 10
Vocabularyplace value, number, equal to, greater than/less than, teen, tens/ones, symbol, more/less, compare, tens frame, part-whole, base 10, number bonds, column, total, sum number sentence, add more than addition'; 't'; take away'; 'subtract' fract family', '10 more' and '10 less', money'; 'coins'; 'notes'; 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; grouping' and 'sharing' division unit fractions' and 'non- unit fractions' and 'non-unit fractions' wholes', 'parts' equal parts' sentence, add more than addition; 't'; 'take away'; 'subtract' fract family', '10 more' and '10 less', money'; 'coins'; 'notes'; 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; grouping' and 'sharing' division unit fractions' and 'non- unit fractions' and 'non- grouping' and 'sharing' division unit fractions' and 'non- unit fractions' and 'non- un
than/less than, teen, tens/ones, symbol, more/less, compare, tens frame, part-whole, base 10, number bonds, column, total, sum number
more/less, compare, tens frame, part-whole, base 10, counting: 'number in a group'; 'number of groups'; 'times- table'; 'array'; 'rows'; 'columns'; 'number line' past', 'a quarter of an hour', 'to (e.g. twenty to three)', 'array', 'now, 'pologon,' pentagon', 'number line' number bonds, column, total, sum number sentence, add more than addition'; '+', 'take away'; 'subtract' fact family', '10 more' and '10 less', money'; 'coins'; 'notes'; 'pounds £', 'pence p'; 'left'; 'buy'; 'spend'; 'how much', 'ralue'; 'total'; and 'hemisphere' vertices', 'vertex', 'quadrilateral', 'line of grouping' and 'sharing' division unit fractions' and 'non-unit fractions' wholes', 'parts' equal parts' half past grams', 'kilograms', 'millitires', 'temperature', 'degrees Celsius', 'hottest', 'coldest', 'g', 'kg', 'mi', 'I', '@C') Progression Year 1: - Count within 100, forwards and backwards, string with any number - Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = - > and = - Number: Year 3: - Reason about the location of numbers to 20 within the linear number, and compose and decompose three-digit numbers using standard and non-standard partitioning - Reason about the location of any three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning - Reason about the location of any three digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning - Reason about the location of any three digit number, and compose and decompose three-digit numbers using standard and non-standard partitioning - Reason about the location of any three digit number in the linear number system, including identifying the p-revious and next multiple of 100 and
base 10, number bonds, column, total, sum number sentence, add more than addition'; '+'; 'take away'; 'subtract' 'fact family, '10 more' and '10 less', money'; 'coins'; 'notes'; 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; 'pence p'; 'left'; 'buy'; 'left'; 'buy'; 'left'; 'buy'; 'left'; 'buy'; 'left'; 'buy'; 'left'; 'left'; 'buy'; 'left'; 'buy'; 'left'; 'buy'; 'left'; 'left'; 'left'; 'buy'; 'left';
NumberYear 1:Number and Place ValueYear 3:Number:Year 3:Year 3:Number:Year 3:Number:Year 3:Number:Year 3:Year 3:
sentence, add more than addition'; '+'; 'take away', 'subtract' 'fact family', '10 more' and '10 less', money', 'coins'; 'notes', 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; 'grouping' and 'sharing' division unit fractions' and 'non-unit fractions' wholes', 'parts' equal parts'half past grams', 'kilograms', 'millilitres', 'litres', 'temperature', 'thermometer', 'degrees Celsius', 'hottest', 'coldest', 'g', 'kg', 'ml', 'l', '9C')Progression Number: Number: Place Value Place Value Place ValueYear 1: • Count within 100, forwards and backwards, starting with any number • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in times - digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Recognise the place value of each digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Recognise the place value of each digit in times - digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Recognise the place value of each digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Recognise the place value of each digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Recognise the place value of each digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Recognise the place value of each digit number in the linear number system, including identifying the previous and
away'; 'subtract' 'fact family', '10 more' and '10 less', money'; 'coins'; 'notes'; 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; 'quale; 'total';and 'hemisphere' vertices', 'vertex', 'quadrilateral', 'line of symmetry' and 'curved surface' equal' or 'equivalent'. grouping' and 'sharing' division unit fractions' and 'non- unit fractions' unit fractions' and 'non- unit fractions' and parts''temperature', 'thermometer', 'degrees Celsius', 'not, 'f', '@C')ProgressionYear 1: - Count within 100, forwards and backwards, starting with any number - Reason about the location of numbers to 20 within the linear number system, including comparing using <> and =Number:Year 3: - Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. - Recognise the place value of each digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 - Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.Number:Year 1:
less', money'; 'coins'; 'notes'; 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; 'value'; 'total'; symmetry' and 'curved surface' equal' or 'equivalent'. grouping' and 'sharing' division unit fractions' and 'non- unit fractions' unit fractions' and 'non- unit fractions' unit fractions' and 'non-unit fractions' wholes', 'parts' equal parts' 'hottest', 'coldest', 'g', 'kg', 'ml', 'l', '@C') Progression Year 1: • Count within 100, forwards and backwards, starting with any number • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number: Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Number: Year 1:
'pence p'; 'left'; 'buy'; 'spend'; 'how much'; 'value'; 'total'; grouping' and 'sharing' division unit fractions' and 'non- unit fractions' unit fractions' and 'non-unit fractions' wholes', 'parts' equal parts' Progression Year 1: • Count within 100, forwards and backwards, starting with any number • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number: Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Number: Year 1:
value'; 'total'; unit fractions' unit fractions' and 'non-unit fractions' and 'non-unit fractions' wholes', 'parts' equal parts' Progression Year 1: • Count within 100, forwards and backwards, starting with any number Number: • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number and Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Number: Year 1:
Image: Number: Year 3: Place Value • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Reason about the location of any three digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Number: Year 1:
Progression Year 1: • Count within 100, forwards and backwards, starting with any number • Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number and Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Number: Year 1:
 Count within 100, forwards and backwards, starting with any number Reason about the location of numbers to 20 within the linear number system, including comparing using <> and = Number and Place Value Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.
Number: • Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = Number and Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Year 1:
Number: Year 3: Number and Place Value Year 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Year 1:
Number and Place ValueYear 3: • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.Number:Year 1:
 Number: Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.
Place Value digit multiples of 10. • Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Year 1:
 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Year 1:
Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Number: Year 1:
Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. Year 1:
Number: Year 1:
• Develop fluency in addition and subtraction facts within 10.
• Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.
• Read, write and interpret equations containing addition (), subtraction () and equals () symbols, and relate additive expressions and equations to real-life
contexts.
Year 3:
• Secure fluency in addition and subtraction facts that bridge 10, through continued practice
• Calculate complements to 100.
• Add and subtract up to three digit numbers using columnar methods
• Aud and subtract up to three-digit numbers using columnal methods.
 Add and subtract up to three-digit numbers using countrial methods. Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole





Measurement:	Year 1: • recognise and know the value of different denominations of coins and notes
Money	Year 3:
	• add and subtract amounts of money to give change, using both £ and p in practical contexts
Number:	Year 1:
Multiplication	• solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher
and Division	Year 3:
	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
	• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times
	one-digit numbers, using mental and progressing to formal written methods
	 solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which a objects are connected to m objects.
Statistics	Year 1:
5101151165	Topic starts in Year 2.
	Year 3:
	• interpret and present data using bar charts, pictograms and tables
	• solve one-step and two-step questions [for example, How many more? and How many rewer?] using information presented in scaled bar charts and pictograms and tables
Geometry:	Year 1:
Properties of	• Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one
Shane	another.
Geometry:	• compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations. Year 3:
Decition and	 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.
Position and	• Draw polygons by joining marked points, and identify parallel and perpendicular sides.
Direction	
Number:	Year 1: • recognise find and name a half as one of two equal parts of an object, shape or quantity, recognise
Fractions	• find and name a guarter as one of four equal parts of an object, shape or guantity.
	Year 3:
	 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts
	• Find unit fractions of quantities using known division facts (multiplication tables fluency)
	 Reason about the location of any fraction within 1 in the linear number system. Add and subtract fractions with the same denominator, within 1
Messurement	Year 1:
Time	• compare, describe and solve practical problems for: time (for example, quicker, slower, earlier, later)
nne	• measure and begin to record the following: time (hours, minutes, seconds)
	• sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
	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
	Year 3:
	• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
	• 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].
Measurement: Mass,	Year 1: (weight and volume)
Capacity and	• compare, describe and solve practical problems for:- mass/weight [for example, heavy/light, heavier than, lighter than]- capacity and volume [for example,
Temperature	full/empty, more than, less than, half, half full, guarter]
	 measure and begin to record the following:- mass/weight- capacity and volume
	Year 3: (mass, capacity)
	• measure, compare, add and subtract:lengths (m/cm/mm);mass (kg/g); volume/capacity (l/ml
Measurement:	Year 1,3,4,5,6
Length and Height	





Lower Key Stage 2

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Year Three

	Autumn	Spring	Summer
NC Links Topic Number: Place Value	 count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number recognise the place value of each digit in a three- digit number (hundreds, tens, ones) compare and order numbers up to 1000 identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words solve number problems and practical problems involving these ideas 		





Number: Addition and Subtraction	 add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three- digit number and hundreds add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and cultaration 		
Number: Multiplication and Division	 recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods 	• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	
Measurement: Money			• add and subtract amounts of money to give change, using both £ and p in practical context
Statistics			 interpret and present data using bar charts, pictograms and tables solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
Measurement: Length and Perimeter		 measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes 	





Number: Fractions	 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 recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators 	 recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators recognise and show, using diagrams, equivalent fractions with small denominators add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7] compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above
Measurement: Time		 tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks 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].
Geometry: Properties of Shape		 draw 2-D shapes and make 3-D shapes using modelling materials recognise 3-D shapes in different orientations and describe them recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make 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 identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Measurement: Mass and Capacity	 measure, compare, add and subtract:lengths (m/cm/mm); mass (kg/g); volume/capacity (l/m 	





Cross curricular Links	Science, Geography, Co History, DT, Music, PE	nputing, Sci	ience, Geogra	aphy, Computing, I	от	Science, History, PE DT	
Curriculum Driver Links	Aspirational Learners	Adventurers & Explorers		Healthy Advocates	Con	Clear nmunicators	Global Citizens
	Growing independence and perseverance. Gain confidence with time tables and fractions knowledge. Making more connections with division and multiplication facts.	Orienteering math enrich activity outdoors.	hment Support classroo respect	ting peers in the om and sharing ideas fully.	Children de their subje understand the classro designed, r and structu to learn the talk effecti	evelop and deepen act knowledge and ding through talk in nom. This is planned, modelled, scaffolded ured to enable them e skills needed to vely.	Use Roman Numerals to record the date.
Vocabulary	'equal to =', 'less than <', 'greate 'compare', 'place value 'hundreo add', addition', 'subtract', 'subtra 'hundreds', 'tens', 'ones', 'left', ' than', 'less than', 'fewer' and 'm 'pattern', 'variation', 'total', 'alto and 'partition' place value', 'app 'estimate', 'fact family' and 'bar discuss working, multiply, multip table, and array. divide,	I to =', 'less than <', 'greater than >', 'order', pare', 'place value 'hundreds, 'more', 'less', addition', 'subtract', 'subtraction', Ireds', 'tens', 'ones', 'left', 'left over', 'greater , 'less than', 'fewer' and 'more' exchange', ern', 'variation', 'total', 'altogether', 'regroup' partition' place value', 'approximate', nate', 'fact family' and 'bar model', and ss working, multiply, multiplication fact, times , and array. divide, 2.		atement, whole, left over, and remainder. ion, division, greater than, less than, equal, share, partition, compare, equally, least, i (10s), ones (1s), exchange, add, subtract, more, difference, convert, amount, cost, uunds (£), pence (p), bar chart', 'table' and i': symbol, altogether, most, least, compare, mallest, between, order, largest, total, w, order, length, height, width, long, wide, tall, high, ruler, longer, shorter, compare, quivalent, equal, measure partition, split, up, combine, representing, 'metres', r, 'in minimation', 'metres', '		Equivalent, fraction, whole number.) inequality, o'clock, a.m./p.m., morning, afternoon, noon and midnight leap year, midnight, midday, noon, morning, afternoon, evening, night, halfway, Roman numerals, digital, am, pm, 12-hour clock, 24-hour clock, stopwatch, start time, end time, January, February, March, April, May, June, July, August, September, October, November, December, triangle, rectangle, and square horizontal, vertical, perpendicular, parallel, clockwise, and anti-clockwise quadrilateral, parallelogram, rhombus and trapezium, weight, weigh, kilograms (kg), estimate, measure, grams (g), compare, order mass', 'scale', 'interval' convert' measurement, scale, measure, interval, amount, order, convert, compare, estimate, more than (>), less than (<), equal to (=).) capacity', 'millilitres', 'litres' and 'equivalent	
Number: Number and Place Value	Year 2: • Recognise the place value of e • Reason about the location of a Year 4:	Year 2: • Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning. • Reason about the location of any two digit number in the linear number system, including identifying the previous and next multiple of 10.					





	• Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100: apply this to identify and work out how many 100s there are in
	other four-digit multiples of 100
	• Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning.
	• Reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1.000 and 100, and
	rounding to the nearest of each.
	• Divide 1.000 into 2.4.5 and 10 equal parts, and read scales/number lines marked in multiples of 1.000 with 2.4.5 and 10 equal parts.
Number:	Year 2:
	• Add and subtract across 10
Addition and	 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more?.
Subtraction	• Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two digit number.
	• Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two digit numbers.
	Year 4:
	• 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.
Number:	Year 2:
Multiplication	 recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
	• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals
and Division	(=) signs
	 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, repeated addition, mental methods, and multiplication and division facts, including
	problems in contexts.
	Year 4:
	 recall multiplication and division facts for multiplication tables up to 12 × 12
	• 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 multiply two-digit and three-digit numbers by a one-digit number using formal written
	layout solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and
	harder correspondence problems such as n objects are connected to m objects
Measurement:	Year 2:
Money	• 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
	Tedi 4:
Chatiatian	Voar 2:
Statistics	e interpret and construct simple nictograms, tally charts, block diagrams and simple tables
	 ack 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
	Year 4.
	Year 4:





	 interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
	 solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Measurement:	Year 2: (length)
Longth and	• 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
Lengthanu	nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
Perimeter	• compare and order lengths, mass, volume/capacity and record the results using >, < and =
	Year 4:
	• 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
Numbor	Year 2:
Number.	• recognise find name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length shape, set of objects or quantity
Fractions	• write simple fractions for example $1/2$ of $6 = 3$ and recognize the equivalence of $2/4$ and $1/2$
	Vor A.
	• recognise and show using diagrams, families of common equivalent fractions
	• recognise and show, using diagrams, rammes of common equivalent matching
	• course of and down in hundreduris, recognise that numericurs and even when driving an object by one numerica and driving terms by term.
	• solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a
	whole number
	• add and subtract fractions with the same denominator
	• recognise and write decimal equivalents of any number of tenths or nundreaths
	• solve simple measure and money problems involving fractions and decimals to two decimal places
Measurement:	Year 2:
Time	• compare and sequence intervals of time
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 times
	 know the number of minutes in an hour and the number of hours in a day.
	Year 4:
	 Convert between different units of measure [for example, kilometre to metre; hour to minute]
Geometry:	Year 2:
Proportion of	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
Properties of	• identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
Shape	• 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
	Year 4:
	• Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.
	• Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of
	regular and irregular polygons.
	• Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with
	respect to a specified line of symmetry.





Measurement:	Year 2:
Mass and	• 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 ruler, scales, thermometers and measuring vessels
Capacity	 compare and order lengths, mass, volume/capacity and record the results using >, < and =
	Year 4:
	Topic starts in Year 5

<u>Year Four</u>

	Autumn	Spring	Summer
NC Links	 count in multiples of 6, 7, 9, 25 and 1000 find 1000 more or loss than a given 		
	number		
Number: Place	 count backwards through zero to include 		
Value	negative numbers		
	• recognise the place value of each digit in a four-		
	digit number (thousands, nundreds, tens, and		
	• order and compare numbers beyond 1000		
	• identify, represent and estimate numbers using		
	different representations		
	• round any number to the nearest 10, 100 or		
	1000		
	involve all of the above and with 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		





	•		
Number: Addition and Subtraction	 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. 		
Measurement: Length and Perimeter	• find the area of rectilinear shapes by counting squares	 Convert between different units o measure [for example, kilometre to metre; hour to minute] measure and calculate the perimeter of a rectilinear figure (including squares) in 	
Measurement: Area		centimetres and metres	
Number: Multiplication and Division	 recall multiplication and division facts for multiplication tables up to 12 × 12 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 multiply two-digit and three-digit numbers by a one-digit number using formal written layout solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	
Number: Fractions		 recognise and show, using diagrams, families of common equivalent fractions count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number add and subtract fractions with the same denominator 	





	 recognise and write decimal equivalents of any number of tenths or hundredths solve simple measure and money problems involving fractions and decimals to two decimal places 	
Number: Decimals	 recognise and write decimal equivalents of any number of tenths or hundredth 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 round decimals with one decimal place to the nearest whole number 	 compare numbers with the same number of decimal places up to two decimal places solve simple measure and money problems involving fractions and decimals to two decimal places
Measurement: Money		 estimate, compare and calculate different measures, including money in pounds and pence
Measurement: Time		• Convert between different units of measure [for example, kilometre to metre; hour to minute]
Statistics		 interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Geometry: Properties of Shapes		 compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 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 complete a simple symmetric figure with respect to a specific line of symmetry





Geometry: Position and Direction							 • describe p in the first qua- e describe modulations oup/down • plot specifie a given polygo 	ositions adrant ovemen f a giver ed point on	s on a 2-D grid as coordinates ts between positions as n unit to the left/right and ts and draw sides to complete
Cross curricular Links	Science Geography Com History DT Music PE	puting	DT, Scier	nce			PE Science	e Histo	ory Geography
Curriculum Driver Links	Aspirational Learners	Adventure Explorer	rs & 5	Healthy Advocates			Clear municators		Global Citizens
	Problem solver. Gain an understanding of decimals and confidence in using these. Fluent in all multiplication tables to 12.	Orienteering math activity outdoors.	enrichment	Use time, shape and me in swimming lessons.	easure	Present and peers. Expla answers.	share ideas to in how to find	r	Use coordinate skills in map reading.
Vocabulary	to 12. ones, thousands, hundreds, tens, counting, compare, order, represent, more than, less than, recombine, partition, numerals rounding', 'round up' and 'round down, add, subtract, sum, total, difference, and exchange. : more than, less than, column method, altogether, strategy, story problem, place value, fact and digit.], width, total, distance, convert, equivalent, centimetre (cm) and metre (m).) kilometre', 'perimeter' and 'rectilinear shape', square, rectangle, length		Area, squar zero (0), tin total, divide fact, lots of multiplicati remainder, correspond one-step, tw denominato simplify, sin equivalent t 'improper f 'regroup', 'j as 'tenths' a one less, gr partition, et hundredths	ed, ones (1s), tens (10s), l nes, multiple, sharing, sha e, multiply (x), multiplicati , grouping, groups of, tim on, multiply (x), divide (÷) share, left over, times-tal ence, combination, repea wo-step, multi-step, fraction or, whole, part, fraction w nplest form, greater than to, less than (<), tenth.) h ractions' and 'mixed num partition', 'equivalent' and and 'hundredths' columns eater than (>), less than (- quivalent, fraction, tenths column. decimal point, d	hundreds are, times ion fact, c es-table,), division bles, equa ated addit ion, nume vall, fracti (>), equa undredth bers, d 'fraction s integer, <), regrou s column lecimal pl	(100s), , equal, livision array , group, al, ction, whole, erator, on strip, l to, s', ns', as well one more, up, and lace,	tenth (0·1), hu ascending, fra bond, roundir pounds (£), po cheaper, more estimate, ove than (>), less t days, weeks, n compare, 12-1 24-hour, am, 'continuous d compare, alto most, greates continuous da angle translat	undredt action, e ng up, ro ence (p) e expen r estima than (<) months, hour, di pm, line ata' tab ogether, t, smalla ata, equ ion coo	th (0·01), digit, whole number, equivalent, convert, number bunding down, place value,), notes, coins, change, isive, rounding, nearest, ate, under estimate, greater , seconds, minute, hours, , years, convert, equal to (=), gital, units of time, analogue, e graph', 'discrete data' and ole, bar chart, pictogram, key, more than, less than, least, est, line graph, discrete data, illateral, scalene and isosceles rdinate quadrant right angle





Progression	Year 3:
Number	• Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three
Number:	digit multiples of 10.
Number and	• Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning
Place Value	• Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.
	• Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.
	Year 5:
	• Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.
	• Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning
	Reason about the location of any number with up to 2 decimals places in the linear number system including identifying the previous and next multiple of 1 and 0.1
	and rounding to the nearest of each
	Divide 1 into 2 4 5 and 10 equal parts and read scales/number lines marked in units of 1 with 2 4 5 and 10 equal parts
	• Convert between units of measure including using common decimals and fractions
	Voor 2:
Number:	 Colculate complements to 100
Addition and	Add and subtract up to three-digit numbers using columnar methods
Subtraction	Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole
	structure. Understand and use the commutative property of addition, and understand the related property for subtraction
	Year 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.
Measurement:	Year 3:
Longth and	 measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (I/mI)
Lengthanu	• measure the perimeter of simple 2-D shapes
Perimeter	Year 5:
	• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre
	and millilitre)
	• 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 (cm2) and square metres (m2) and
	estimate the area of irregular shapes
	• use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.
Number:	Year 3:
Multiplication	• recail and use multiplication and division facts for the 3, 4 and 8 multiplication tables
and Division	• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
Measurement: Length and Perimeter Number: Multiplication and Division	 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. Year 3: measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes Year 5: convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) 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 (cm2) and square metres (m2) and estimate the area of irregular shapes use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. Year 3: recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods





	• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence
	problems in which n objects are connected to m objects
	Year 5: • Multiply and divide numbers by 10 and 100, understand this as equivalent to making a number 10 or 100 times the size or 1 tenth or 1 hundred th times the size
	 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.
	• Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.
	• Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context
Number:	Year 3:
Eractions	• 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
FIDUIUIIS	 recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators
	• recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators recognise and show, using diagrams, equivalent fractions
	with small denominators add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]
	 compare and order unit fractions, and fractions with the same denominators, solve problems that involve all of the above.
	Year 5:
	• Find non-unit fractions of quantities
	 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. Recall desired fractions and understand that they have the same value and the same position in the linear number system.
NL	• Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10 and for multiples of these proper fractions.
Number:	Tonic starts in Year A
Decimals	Year 5'
	• read and write decimal numbers as fractions [for example, 0.71 = 100 71]
	• 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
	 solve problems involving number up to three decimal places
Measurement:	Year 3:
Money	 add and subtract amounts of money to give change, using both £ and p in practical contexts
money	Year 5:
	• use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.
Measurement:	Year 3: • tall and write the time from an analogue clock, including using Reman numerals from Lto XII, and 12, hour and 24, hour clocks
Time	• cell and while the fine 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 /n 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].
	Year 5:
	• solve problems involving converting between units of time.





Statistics	Year 3:
	 interpret and present data using bar charts, pictograms and tables
	• solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms
	and tables
	Year 5:
	 interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
	 solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Geometry:	Year 3:
Properties of	• Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. • Draw polygons
Properties of	by joining marked points, and identify parallel and perpendicular sides
Shapes	Year 5:
Geometry:	• 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
Desition and	changed.
Position and	 identify 3-D shapes, including cubes and other cuboids, from 2-D representations
Direction	 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 3600) angles at a point on a straight line and 1/2 a turn (total 1800) other multiples of 900
	 use the properties of rectangles to deduce related facts and find missing lengths and angles
	 distinguish between regular and irregular polygons based on reasoning about equal sides and angles.





Upper Key Stage 2

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

Year Five

	Autumn	Spring	Summer
NC Links Number: Place Value	 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 to the nearest 10, 100, 1000, 10 000 and 100 000 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 		
Number: Addition and Subtraction	 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. 		
Statistics	 solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables. 		
Number: Multiplication and Division	 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 (nonprime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 	 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 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving 	
Measurement: Perimeter and Area		• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	





Number: Fractions	 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, 5 2 + 5 4 = 5 6 = 1 5 1 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 	 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 (cm2) and square metres (m2) and estimate the area of irregular shapes use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. add and subtract fractions with the same denominator and denominators that are multiples of the same number Unit fractions Non-unit fractions Reasoning 	
Number: Decimals and Percentages			 read and write decimal numbers as fractions [for example, 0.71 = 100 71] 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 solve problems involving number 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 solve problems which require knowing percentage and decimal equivalents of 2 1, 4 1, 5 1, 5 2, 5 4 and those fractions with a denominator of a multiple of 10 or 25.
Number: negative numbers		 Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
Geometry: Properties of Shape		 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 3600) angles at a point on a straight line and 1/2 a turn (total 1800) other multiples of 900 use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
Geometry: Position and Direction		• 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.
Statistics	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	





			• solve co problems charts, pic	omparison, sum and differend using information presented ctograms, tables and other gr	ce in bar aphs		
Measurement: Converting Units						 convert between measure (for examp centimetre and met gram and kilogram; understand and u between metric unit such as inches, pour solve problems in units of time use all four opera involving measure [t volume, money] usi scaling. 	different units of metric ole, kilometre and metre; cre; centimetre and millimetre; litre and millilitre) se approximate equivalences ts and common imperial units nds and pints ivolving converting between ations to solve problems for example, length, mass, ng decimal notation, including
Measurement: Volume						estimate volume blocks to build cubo capacity [for examp	[for example, using 1 cm3 ids (including cubes)] and le, using water]
Cross curricular Links	Science, Geography, Hi	story				Geography Scie Art	ence Computing PE DT
Curriculum Driver Links	Aspirational Learners	Adventure Explore Orienteering enrice activity to be compoutdoors.	ers & rs chment pleted	Healthy Advocates	Communi class. Use regarding	Clear pommunicators Clear clea	Global Citizens
Vocabulary	ones (1s), tens (10s), hundreds thousands (1000s), place value, numerals, partition, estimate, r down, greater than (>), less tha	(100s), . Roman ound up, round n (<), ten	inverse op value, parti column me multiply, di	peration, place value total, equal ition, digit, add, subtract, grid m thod, represent, factor, multiple ivide, remainder, equivalent, nur	l, place ethod, e, merator,	angle, turn whole tu acute angle, right ar angle degrees (°) 90 degrees interior ang	urn, half turn, quarter turn ngle, obtuse angle, refl ex D degrees 180 degrees, 360 gle protractor parallel





	thousands (10,000s), hundred thousand	denominator, mixed number, convert, sequence,	perpendicular angle, interior angle grid regular,				
	(100,000) positive negative rounding, sequence,	order, multiply (×), multiple, divide (\div), dividend,	irregular polygon, quadrilateral 2D, 3D				
	hundrods (100s) thousands (1000s) ton	divisor quotient expand proper/impreper fraction	coordinate perizontal coordinate vertical				
	thousands (10,000s), hundred, thousands	simplify percent percentage tenths hundredths	coordinate horizontal axis vertical axis line				
	(100 000s) total difference inverse round	and thousandths decimal decimal place fraction	graph' 'discrete data' and 'continuous data'				
	mentally, estimate, line graph, dual line graph.	place value, digits, and decimal point add, subtract.	table, bar chart, pictogram, key, compare.				
	horizontal axis, vertical axis, axes, scale, data.	multiply, divide ones, tenths, hundredths.	altogether, more than, less than, least, most.				
	information, interpret, complete, table two-way	thousandths difference, group, share, compare,	greatest, smallest, line graph, discrete data,				
	table, square, and cube numbers multiple,	represent column, place value, exchange mass,	continuous data, mass, capacity, length, time,				
	factor, prime, composite, square, cube numbers	weight, length, width, cost, height	quantity metric units, gram, kilogram, millilitre,				
	multiply (x), multiplication fact, times, divide (,),		litre, millimetre, centimetre, metre, kilometre				
	division, perimeter, area, centimetres (cm),		imperial units, ounce (oz), pound (lb), stone (st),				
	metres (m), rectilinear shape, distance,		pint (pt), gallon, inch (in), foot (f), yard (yd)				
	measure, convert) scale formula square		second, minute, hour, day, week, month, year				
	centimetre square metre		convert, equal to, equivalent, approximately, per,				
			measure, remainder, multiple timetable, 24-hour,				
			digital, duration, volume, capacity, solid, liquid,				
			container cube, cuboid, thangular, prisin SD shapes objects calculate estimate compare				
			count accurately order amount irregular				
			prediction, exact unit (cm) cubes, units of				
			measurement, measure less, more, less than (<),				
			more than (>), largest, smallest, least, greatest,				
			equal space inside height, length, width, size, tall				
			layer, slice multiple, total,				
Progression	Year 4:						
U U	 Know that 10 hundreds are equivalent to 1 thou 	sand, and that 1,000 is 10 times the size of 100; apply the size of	nis to identify and work out how many 100s there				
Number: Number	are in other four-digit multiples of 100						
Number: Number	Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard						
and Place Value	partitioning.						
	• Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each						
	 Divide 1 000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1 000 with 2, 4, 5 and 10 equal parts. 						
	• Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.						
	• Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10 or 100)						
	Year 6:						
	 Solve multiplication problems that have the sca 	ling structure, such as 'ten times as long'. Understand th	nat per cent relates to 'number of parts per				
	hundred', and write percentages as a fraction with	denominator 100, and as a decimal fraction					
	Compare and order numbers, including those with up to 2 decimal places. Add and subtract using mental and formal written methods.						





	• Compare and order numbers, including those with up to 2 decimal places. Estimate and approximate to the nearest 1 or 0.1.
	Read scales on graphs and measuring instruments.
Number:	Year 4:
Addition and	• count in multiples of 6, 7, 9, 25 and 1000
Culture at law	 find 1000 more or less than a given number
Subtraction	 count backwards through zero to include negative numbers
	 recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 100 identify represent and estimate numbers using different representations
	 round any number to the nearest 10, 100 or 1000
	• round any number to the hearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers read Roman numerals to 100 (I to C) and
	Solve number and practical problems that involve and of the above and with increasingly large positive numbers read Noman numerals to 100 (i to c) and know that over time, the numeral system changed to include the concent of zero and place value.
	Year 6:
	• Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships
	restricted to multiplication by a whole number).
	• Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-
	value understanding.
	• Solve problems with 2 unknowns
	Solve problems involving ratio relationships.
Statistics	Year 4:
	 interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
	 solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
	Year 6
	• interpret and construct pie charts and line graphs and use these to solve problems
	• calculate and interpret the mean as an average.
Number:	Year 4:
Multiplication	• Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size
and Division	 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication
	• Understand and apply the distributive property of multiplication.
	Year 6:
	 solve problems involving addition, subtraction, multiplication and division
	• use their knowledge of the order of operations to carry out calculations involving the four operations
	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
	• divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number
	remainders, fractions, or by rounding, as appropriate for the context
	• divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders
	according to the context
	 perform mental calculations, including with mixed operations and large number





Measurement:	Year 4:
Porimotor and	 Convert between different units of measure [for example, kilometre to metre; hour to minute]
Fermeter and	 measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
Area	 find the area of rectilinear shapes by counting squares
	Year б:
	• recognise that shapes with the same areas can have different perimeters and vice versa
	• recognise when it is possible to use formulae for area and volume of shapes
	- calculate the area of parallelograms and triangles
	\sim calculate acting to and compare volume of subscand subside using standard units including subic contingers (m^2) and subic matrix (m^2) and
	• calculate, estimate and compare volume of cubes and cubics using standard units, including cubic centimetres (cms) and cubic metres (ms), and
	extending to other units [for example, mms and kms].
Number:	Year 4 :
Fractions	• Reason about the location of mixed numbers in the linear number system.
	• Convert mixed numbers to improper fractions and vice versa
	 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.
Number:	Year 6:
Decimals and	 Recognise when fractions can be simplified, and use common factors to simplify fractions.
Decimals and	• Express fractions in a common denomination and use this to compare fractions that are similar in value.
Percentages	• Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common
	denomination as a comparison strategy.
All solutions and solutions	
Number: negative	
numbers	
Goomotry	Year 4
Geometry.	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
Properties of	• identify acute and obtuse angles and compare and order angles up to two right angles by size
Shape	 identify lines of symmetry in 2-D shapes presented in different orientations
Shape	• complete a cimple cumpetric fourse with respect to a specific line of summetry
	• complete a simple symmetric figure with respect to a specific line of symmetry.
	rear o. uraw 2-0 shapes using given ultitetisions and aligies
	• recognise, describe and build simple 3-D shapes, including making nets
	• compare and classify geometric snapes based on their properties and sizes and ind unknown angles in any triangles, quadriaterais, and regular polygons
	• illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
	 recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
Geometry:	Year 4:
Position and	• describe positions on a 2-D grid as coordinates in the first quadrant
Disection	 describe movements between positions as translations of a given unit to the left/right and up/down
Direction	 plot specified points and draw sides to complete a given polygon
	Year 6:
	 describe positions on the full coordinate grid (all four quadrants)
	 draw and translate simple shapes on the coordinate plane, and reflect them in the axes.





Statistics	 Year 4: interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Year 6: interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average.
Measurement: Converting Units	Year 4: • 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 Year 6:
Measurement: Volume	 calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]. solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate 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 convert between miles and kilometres

<u>Year Six</u>

	Autumn	Spring	Summer
NC Links Number: Place Value	 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 		
Number: Addition, Subtraction, Multiplication and Division	 multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context divide numbers up to 4 digits by a two-digit number using the formal 		





	written method of short division where	
	appropriate, interpreting remainders according to	
	the context	
	 perform mental calculations, including with 	
	mixed operations and large number	
	 identify common factors, common multiples and 	
	prime numbers	
	 use their knowledge of the order of operations 	
	to carry out calculations involving the four	
	operations	
	 solve addition and subtraction multi-step 	
	problems in contexts, deciding which operations	
	and methods to use and why	
	 solve problems involving addition, subtraction, 	
	multiplication and division	
	 use estimation to check answers to calculations 	
	and determine, in the context of a problem, an	
	appropriate degree of accuracy.	
Number:	 use common factors to simplify fractions; use 	
Fractions	common multiples to express fractions in the same	
Tractions	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 form [for example, 4 1 ×	
	21=81]	
	• divide proper fractions by whole numbers [for	
	example, $31 \div 2 = 61$]	
	associate a fraction with division and calculate	
	decimal fraction equivalents [for example, 0.375]	
	for a simple fraction [for example, 8 3]	
	recall and use equivalences between simple	
	tractions, decimals and percentages, including in	
	different contexts	





Geometry: Position and Direction		 describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Geometry: Properties of Shape		 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 circumference and know that the diameter is twice the radius recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find
Number: Decimals	 identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places multiply one-digit numbers with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places solve problems which require answers to be rounded to specified degrees of accuracy recall and use equivalences between simple fractions, decimals and percentages, including in different contexts 	
Number: Percentages	• recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	





Number: Algebra		 use simple formulae generate and describe linear number sequences express missing number problems algebraically find pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables 	
Measurement: Converting Units	 solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate 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 convert between miles and kilometres 		
Measurement: Area, Perimeter and Volume		 recognise that shapes with the same areas can have different perimeters and vice versa recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]. 	
Number: Ratio		 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 solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. 	





Statistics			 interpret and use the calculate 	and construct pie charts and line se to solve problems and interpret the mean as an aver	graphs rage.		
Cross curricular Links	Science Geography Computing History DT Music PE		DT Scier	nce		DT Science Com	puting
Curriculum Driver Links	Aspirational Learners	Adventured Explorer	rs & 5	Healthy Advocates	Co	Clear mmunicators	Global Citizens
	Develop an understanding of ratio and algebra.	Orienteering enrich activity to be comp outdoors.	nment leted		Children solve pro Communi class. Use algebra.	work together to blems. cate findings to the vocabulary regarding	Prepare for secondary school and contribute to society.
Vocabulary	ones (1s), tens (10s), hundreds ((1,000s), ten thousands (10,000s) thousands (100,000s), millions (2 million (10,000,000) place value partition/partitioned/ partitionin estimate compare/comparison/ order/ordering less than (<), gre to (=) rounding/rounded/round, odd, even accurate/accurately, e approximate, remainder inverse fraction, simplify, numerator, de product, approximation , divide, division, long division factor, mu dividend, whole, part numerator common denominator equivaler simplest form factor, highest co lowest common multiple, comp ascending, descending less than proper fraction, improper fraction	100s), thousands s), hundred 1,000,000s), ten ng interval comparing ater than (>), equal negative, positive exactly, grid method mominator, division, short ltiple, divisor, r, denominator, at simplify, mmon factor, are order, n, greater than on mixed number	hundredths group, shar simplify, eq remainder, decimal fra hundredth, divide (÷), s simplify, pa algebra, alg substitute g equation in space, volu centimetres centimetres square, tria millimetres kilometres ((ml), litres ((lbs), pints,	, thousandths factor, multiple, pro- e numerator, denominator conve- uivalent divisor, dividend, quotier per cent (%), percentage parts, wi- iction, equivalent fraction, tenth, half, quarter less than (<), greate hare, multiply (×) convert, compa- ttern, growing pattern sequence ebraic expression formula, formul- generalise operation calculation, c iverse solution, perimeter, distance me centimetres (cm), metres (m), s (cm2), square metres (m2), cub s (cm3), cubic metres (m3) recta ngle, rectilinear shape, sides, leng (mm), centimetres (cm), metres ((km), grams (g), kilograms (kg), mi l) inches (in), feet (), ounces (oz), miles, gallons, yards digits, decima-	oduct ert, hole er than (>) re, order, rule term lae alculate ce, area, square ic ngle, th, m), llilitres pounds al	equilateral, oblong, sl identical, similar, para (m), distance, length, halfway, line, propert positive translation, r up, right, mirror, awa measurement, length right angle, interior p scale vertex, edge, fac isosceles, equilateral, quadrilateral, parallel trapezium diameter, n concentric, centre per cylinder, prism, cuboi share pie chart, segmangle, right angle tall percentage line grapi interpret, increase, at axis, y-axis, minus (–).	hape, irregular, hexagon, allelogram perimeter, metre long horizontal, vertical ies, value, reason negative, eflection, original, le, down, y, diagonal degrees, angle, obtuse, acute, reflex, rotractor, baseline, crosshairs, ce parallel properties triangle, scalene regular, polygon, ogram, kite, rhombus, radius, circumference, erimeter pyramid, tetrahedron, d, cube, average, mean, set, nent, whole, section, degree, ly chart, bar chart fraction, h, axis/axes, estimate, accurate, pove, below, zero (0), value, x- , between, plot, point, vertical,





	convert, plotting, coordinates, quadrant, point, axis, x-axis, y-axis, grid, x-coordinate, y-coordinate vertices, vertex	conversion table, conversion graph. metric, imperial, length, mass, volume, capacity, distance measure, convert, equal, equivalent, approximate, smaller (unit), larger (unit), for every, ratio, ratio, ratio notation, 1 : 2 proportion part, whole, total group fraction unequal, equal simplest form, simplify for every x there are y similar enlarge, enlargement scale, map scale, scale	horizontal, construct, convert/conversi on, straight, equivalent, predict, curve more, equal, even, size, total, share, great(er/est),			
		factor				
Progression Number: Number and Place Value	Year 5: • read, write, order and compare numbers to at least • count forwards or backwards in steps of powers of • interpret negative numbers in context, count forwa • round any number up to 1 000 000 to the nearest • solve number problems and practical problems that • read Roman numerals to 1000 (M) and recognise y	t 1 000 000 and determine the value of each digit f 10 for any given number up to 1 000 000 ards and backwards with positive and negative whole numb 10, 100, 1000, 10 000 and 100 000 at involve all of the above years written in Roman numerals.	pers, including through zero			
Number: Addition.	 Year 5: add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 					
Culature attack	 add and subtract numbers mentally with increasingly large numbers 					
Subtraction,	 use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 					
Multiplication	 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. 					
and Division	• identify multiples and factors, including finding all	factor pairs of a number, and common factors of two num	bers			
	 know and use the vocabulary of prime numbers, pr 	ime factors and composite (nonprime) numbers establish	whether a number up to 100 is prime and recall prime			
	numbers up to 19	ait number using a formal unitan mathed including long r	nultiplication for two digit numbers			
	 multiply numbers up to 4 digits by a one- of two-di multiply and divide numbers mentally drawing upo 	git number using a formal written method, including long r	nultiplication for two-digit numbers			
	 divide numbers un to 4 digits by a one-digit number 	r using the formal written method of short division and int	erpret remainders appropriately for the context			
	 multiply and divide whole numbers and those invol 	lving decimals by 10, 100 and 1000				
	• recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)					
	• solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes					
	 solve problems involving addition, subtraction, mu 	Itiplication and division and a combination of these, includ	ing understanding the meaning of the equals sign			
	 solve problems involving multiplication and division 	n, including scaling by simple fractions and problems involv	ing simple rates			
Number:	Year 5: (fractions)					
Fractions	• compare and order fractions whose denominators	are all multiples of the same number	and an data a			
	 Identify, name and write equivalent fractions of a g recognice mixed numbers and improves fractions a 	iven fraction, represented visually, including tenths and nu	Indreatins			
	• recognise mixed numbers and improper fractions a $5.2 + 5.4 = 5.6 = 1.5.1$	and convert from one form to the other and write mathema	ancal statements > 1 as a mixed number [for example,			
	• add and subtract fractions with the same denomination of the same den	ator and denominators that are multiples of the same num	ber			
	• multiply proper fractions and mixed numbers by w	hole numbers, supported by materials and diagrams				
	 read and write decimal numbers as fractions [for e 	example, 0.71 = 100 71]				
	 recognise and use thousandths and relate them to 	tenths, hundredths and decimal equivalents				





	• 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 • solve problems which require knowing percentage and decimal equivalents of 21, 41, 51, 52, 54 and those fractions with a denominator of a multiple of 10 or
	25.
Geometry:	Year 5:
Position and	• 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
Direction	. ● 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
Geometry:	• draw given angles, and measure them in degrees
Properties of	 Identify: angles at a point and one whole turn (total 3600) angles at a point on a straight line and 1/2 a turn (total 1800) other multiples of 900 Use the properties of rectangles to deduce related facts and find missing lengths and angles
Shane	 distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
Number:	Year 5:
Docimals	• read and write decimal numbers as fractions [for example, 0.71 = 100 71]
Decimais	 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 road, write, order and compare numbers with up to three decimal places.
	• solve problems involving number up to three decimal places
	• solve problems which require knowing percentage and decimal equivalents of 21, 41, 51, 52, 54 and those fractions with a denominator of a multiple of 10 or
	25.
Number:	Year 5: • recognise the persent symbol (%) and understand that persent relates to 'number of parts per hundred', and write persentages as a fraction with dependenter of the second s
Percentages	100, and as a decimal
	• solve problems which require knowing percentage and decimal equivalents of 21, 41, 51, 52, 54 and those fractions with a denominator of a multiple of 10 or
	25.
Number:	Year 5: Topic starts in Year 6.
Algebra	
Measurement:	Year 5:
Converting	• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and minimetre; gram and kilogram; litre and millilitre)
Units	 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 (cm2) and square metres (m2) and
Measurement:	estimate the area of irregular shapes
Area, Perimeter	 use an four operations to solve problems involving measure for example, length, mass, volume, money jusing decimal notation, including scaling. convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre
and Volume	and millilitre)
	• understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints #
	 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. estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]
Number: Ratio	Year 5: Topic starts in Year 6.
Statistics	 Year 5: solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables.