Maths

Knowledge and Skills Curriculum Overview

	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
Nursery	Topic(s) (Application Topics)	**Number and Place Value (Numbers to 3)** **Geometry** • **2d shapes** **Measurement** • **Size**		**Number and Place Value (Numbers to 4)** **Measurement** • **Time** **Geometry** • **Positional Language**		**Number and Place Value (Numbers to 5)** **Addition and Subtraction (Numbers to 5)** (Please note: This is to be concrete, and pictorial. Stem sentences to be used rather number sentence) **Measurement** • **Weight** **Geometry** • **Patterns**	
	Procedural/ Conceptual Skills	• Number sense to 3 • Visual Patterns • Number songs and rhymes • Composition of numbers to 3 • Concept images to 3 • Correspondence 1:1 • Exploration of numbers and numerals to 5 • Numerals of significant importance • Matching like for like • Stable order count • Itemising • Tagging • Selecting a small number of objects from a group • Describing size • 2D shapes • Capacity • Exploring shape through construction/loose parts • Anticipating specific time-based events such as mealtimes or home time		• Number sense to 4 • Movement patterns • composition of numbers to 4 • Concept images to 4 • Cardinality • Conservation of number • Exploration of 'more' • Sharing objects • Sorting – exact matching/sorting by a single attribute • Categorising • Introduction of 5 frames • reciting numbers in order to 5 • Exploring language of time • Explorations of space/area • Positional language • Numbers in the environment		• Number sense to 5+ • Temporal patterns • Numeral patterns • Composition of numbers to 5 • Concept images to 5 • Exploration of more/less • Sharing into equal parts • Introduced to simple board games • Subitising to 5 • Practical combining/addition • Number bonds to 5 • Sorting and categorising by given and own criteria • Exploration of same/different • Assigning numeral to quantity • Weight • Practical subtraction	
	Key Fluency Facts	**Recognising/ subitising representations of 1**	**Numbers in order to 3**	**Recognising/ subitising representations of 2**	**Numbers in order to 4**	**Recognising/ subitising representations of 3**	**Numbers in order to 5**
	Key Fluency Skills	**Counting** forwards 5 **Number bonds** within 3 **1-1 correspondence** **Number formation** – (0-3)		**Counting** forwards and backwards to 5 **1-1 correspondence** **Number formation** – (0-4)		**Counting** forwards and backwards to 10 **Number bonds** within 5 **1-1 correspondence** **More and less** Number formation – (0-5)	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
Reception	Topic(s) (Application Topics)	**Number and Place Value (Numbers to 5)** **Geometry** • **2d shapes, positional language** • **Patterns** **Measurement** • **Exploring money**		**Number and Place Value (Numbers to 10)** **Addition and Subtraction (Numbers to 10)** (Please note: This is to be concrete, and pictorial. Stem sentences to be used rather number sentence) **Measurement** • **Time** **Statistics** • **Tally system**		**Number and Place Value (Numbers to 20)** **Addition and Subtraction (Numbers to 20)** (Please note: This is to be concrete, and pictorial. Stem sentences to be used rather number sentence) **Geometry** • **Patterns** • **3d Shapes** **Measurement** • **Compare length, height, mass, capacity, volume.** • **Application of money**	
	Procedural/ Conceptual Skills	• Number sense to 5+ • Number bonds to 5 • Temporal patterns • Numeral patterns • Repeating patterns • Composition of numbers to 5+ • Representing numbers and quantities in different ways • Reciting numbers in order to 10 • more/less/fewer • Exploring money • Describing 2D shapes • Positional language • Matching numeral to quantity • Practical addition • Sorting and categorising by own and given criteria • Binary sort • Introduction to 10's frames • Introduction to a number line/track • weight		• Number sense to 10 • Number bonds to 10 • Symmetrical patterns • Composition of numbers to 10 • Concept images to 10 • Multiple set sort • Estimating • Exploring mathematical problems • Sustained construction • Practical addition and subtraction • Tally system • Recording mathematical information/representation • Sequencing events and exploring language/concept of time • Practical addition and subtraction		• Number sense towards 20 • Recite beyond 20 • Growing patterns • Composition of numbers to 15 • Concept images to 15 • Halving/doubling • Comparing sets • Use and apply skills on a number line and a number track • Describing 3D shape • Refined construction • Language to talk about size, weight, capacity, position, distance, time • Compare quantities and objects • Solve practical problems • Recognise, create and describe patterns • Explore characteristics of everyday objects and shapes and use mathematical language to describe them • Estimate • Measure, weigh and compare • Order objects • Talk about properties and position • Addition and subtraction sentences • Even/odd numbers	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
	Key Fluency Facts	**Number names in order to 5.**	**Numbers in order to 10.**	**Days of the week.**	**Number bonds to make 5.**	**Number bonds to make 10.**	**Count forwards in steps of 10.**
	Key Fluency Skills	**Counting** forwards and backwards **Number bonds** within 5 (part whole models/ tens frames) **1-1 correspondence** **Number formation** – (0-5) **Autumn 2** **One more and One less**		**Doubling, Halving and Sharing** **Number bonds** within 10 (part whole models/ tens frames) **1-1 correspondence** **One more and One less** **Number formation** – (0-10)		**Counting** forwards and backwards **Doubling, Halving and Sharing** **Number bonds** within 10 **1-1 correspondence** **One more and One less** **Counting** in 2s and 10s **10 more and 10 less** Number formation – (0-20)	
Year 1	**Topic(s)** **(Application Topics)**	**Number and Place Value (Counting, Reading and Writing, More than, Less than)** **Measurement** • **Describe length, height, mass, capacity, volume.** • **Coins and notes**		**Properties of Shape** **Add and Subtract (to 20)** **Measurement** • **Compare length, height, mass, capacity, volume.** • **Coins and notes**		**Multiplication and Division** **Fractions** **Geometry** • **Position (turns)** **Measurement** • **Time**	
	Procedural/ Conceptual Skills	• Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 20 in numerals; count in multiples of twos, fives and tens • Given a number, 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 20 in numerals and words		• 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), pyramids and spheres]. • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one-digit and two-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.		• 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. • Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
Year 2	**Key Fluency Facts**	**Number bonds for each number to 6**	**Count forward and backward in steps of 2, 5 and 10**	**Doubles and halves of numbers to 10.**	**Number bonds to 10**	**Name and number of days of the week, months of the year and seasons.**	**Number bonds for each number to 10**
	Key Fluency Skills	**Counting** forwards and backwards up to 20 **Counting** in 10s **Doubling** and **halving** **Partitioning** numbers **Recalling** 10 times table facts		**Counting** forwards and backwards up to 50 **Counting** in 10s and 5s **Doubling** and **halving** **Partitioning** numbers **Identifying** one more, **Identifying** one less **Recalling** 10 and 5 times tables **Mentally adding and subtracting**		**Counting** forwards and backwards up to 100 **Counting** in 10s, 5s and 2s **Doubling** and **halving** **Partitioning** numbers **Identifying** one more, **Identifying** one less **Recalling** 2, 5, 10 times tables **Mentally adding and subtracting** **Comparing** numbers (<, > or =) **Ordering** numbers	
	Topic(s) **(Application Topics)**	**Number and Place Value** **Addition and subtraction** **Measurements** • **Describe length, height, mass/weight, capacity, volume, temperature** **Statistics**		**Money** **Multiplication and division** **Statistics**		**Time** **Fractions** **Geometry**	
	Skills	count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward recognise the place value of each digit in a two-digit number (10s, 1s) 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 solve problems with addition and subtraction: using concrete objects and pictorial		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 count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward 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		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, 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 identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	**Term 2**	**Term 1**	**Term 2**	**Term 1**	**Term 2**
		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 1s a two-digit number and 10s 2 two-digit numbers adding 3 one-digit numbers show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems compare and order lengths, mass, volume/capacity and record the results using >, < 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 rulers, scales, thermometers and measuring vessels		them using the multiplication (×), division (÷) and equals (=) signs show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 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 interpret and construct simple pictograms, tally charts, block diagrams and 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		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 objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)	
	Key Fluency Facts	**Number bonds to 20.**	**Multiplication and division facts for the 10 times table.**	**Doubles and halves of numbers to 20.**	**Multiplication and division facts for the 5 times table.**	**Addition and subtraction facts for multiples of 10 to 100**	**Multiplication and division facts for the 2 times table**
	Key Fluency Skills	**Counting** forwards and backwards **Counting** in 10s **Doubling** and **halving**		**Counting** forwards and backwards **Counting** in 10s and 5s **Doubling** and **halving**		**Counting** forwards and backwards **Counting** in 10s, 5s and 2s **Doubling** and **halving**	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		Partitioning numbers **Recall** of 10 times table facts		**Partitioning** numbers **Recognising** One more, **Recognising** One less **Recall** of 10 and 5 times tables Mental **addition** and **subtraction**		**Partitioning** numbers **Recognising** One more, **Recognising** One less **Recall** of 2, 5, 10 times tables Mental **addition** and **subtraction** **Compare** numbers (<, > or =) **Order** number	
Year 3	**Topic(s)** **(Application Topics)**	**Number and Place Value** **Addition and Subtraction** **Measures (measure, compare, add, subtract)** **Statistics**		**Multiplication and Division** **Time** **Money (add and subtract)** **Statistics**		**Fractions** **Geometry**	
	Skills	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 3-digit number (100s, 10s, 1s) compare and order numbers up to 1,000 identify, represent and estimate numbers using different representations read and write numbers up to 1,000 in numerals and in words solve number problems and practical problems involving these ideas add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction		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 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, am/pm, morning, afternoon, noon and midnight		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 non-unit 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 Compare and order unit fractions, and fractions with the same denominators Solve problems that involve all of the above. measure the perimeter of simple 2-D shapes draw 2-D shapes and make 3-D shapes using modelling	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		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 subtraction measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) interpret and present data using bar charts, pictograms and tables		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] add and subtract amounts of money to give change, using both £ and p in practical contexts 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		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 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 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	
	Key Fluency Facts	**Number bonds for all numbers to 20.**	**Multiplication and division facts for the 3 times table.**	**Multiplication and division facts for the 4 times table**	**Multiplication and division facts for the 8 times table.**	**Recall facts about durations of time.**	**Doubles and halves of All numbers to 20 All multiples of 10 to 500 All multiples of 100 to 5000**
	Key Fluency Skills	**Make** representations of numbers **Counting** in multiples 2, 5, 10, 4 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** numbers Mental **addition** and **subtraction**	**Make** representations of numbers **Counting** in multiples 2, 5, 10, 4, 8, 3 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** numbers Mental **addition** and **subtraction** Roman numerals **Comparing** numbers (<, > or =) **Rounding**	**Make** representations of numbers **Counting** in multiples 2, 5, 10, 4, 8, 3 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** of numbers Mental **addition** and **subtraction** Roman numerals **Comparing** numbers (<, > or =) **Rounding**	**Key Fluency Skills**	**Make** representations of numbers **Counting** in multiples 2, 5, 10, 4 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** numbers Mental **addition** and **subtraction**	**Make** representations of numbers **Counting** in multiples 2, 5, 10, 4, 8, 3 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** numbers Mental **addition** and **subtraction** Roman numerals **Comparing** numbers (<, > or =) **Rounding**
Year 4	**Topic(s) (Application Topics)**	**Number and Place Value** **Addition and Subtraction**		**Multiplication and Division**		**Geometry**	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		Statistics		**Fractions**		**Time** **Measures**	
	Skills	count in multiples of 6, 7, 9, 25 and 1,000 find 1,000 more or less than a given number count backwards through 0 to include negative numbers recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) order and compare numbers beyond 1,000 identify, represent and estimate numbers using different representations round any number to the nearest 10, 100 or 1,000 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 know that over time, the numeral system changed to include the concept of 0 and place value 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 interpret and present discrete and continuous data using appropriate graphical methods, including bar		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 3 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 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects 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 a 100 and dividing tenths by 10. 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		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 2 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 describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon read, write and convert time between analogue and digital 12- and 24-hour clocks solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting square estimate, compare and calculate different measures, including money in pounds and pence	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
Year 5		charts and time graphs solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs		Recognise and write decimal equivalents to ¼; ½; ¾ 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 1 decimal place to the nearest whole number Compare numbers with the same number of decimal places up to 2 decimal places Solve simple measure and money problems involving fractions and decimals to 2 decimal places.			
	Key Fluency Facts	**Number bonds to 100.**	**Multiplication and division facts for the 6 times table.**	**Multiply and divide single-digit numbers by 10 and 100.**	**Multiplication and division facts for the 9 , 11 and 7 times tables.**	**Recognise decimal equivalents of fractions.** **Convert between the 12 hour and 24 hour clock.**	**Doubles and halves of** **All numbers to 50** **All multiples of 5 to 1000** **All multiples of 50 to 5000**
	Key Fluency Skills	**Make** representations of numbers **Counting** in multiples 3, 6, 9, 25, 100 and 1000 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** numbers Mental **addition** and **subtraction**		**Make** representations of numbers **Counting** in multiples 3, 6, 9, 7, 11, 25, 100, 1000 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** numbers Mental **addition** and **subtraction** **Convert** to Roman numerals **Comparing** numbers (<, > or =)		**Make** representations of numbers **Counting** in multiples 3, 6, 7, 9, 11, 12, 25, 100 and 1000 **Find** __ more and ___ less than a number **Order** numbers **Read** and **write** numbers in numerals and words **Partition** of numbers Mental **addition** and **subtraction** **Convert** to Roman numerals **Comparing** numbers (<, > or =) **Rounding** **Counting** through negative numbers	
	Topic(s) (Application Topics)	**Number and Place Value** **Addition and Subtraction**		**Multiplication and Division** **Fractions**		**Fractions** **Geometry**	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		Statistics				Measures Time	
	Skills	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 0 round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 solve number problems and practical problems that involve all of the above read Roman numerals to 1,000 (M) and recognise years written in Roman numerals 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 solve comparison, sum and difference problems using information presented in a line graph		identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply 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 1,000 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 multiplication and division, including scaling by simple fractions and problems		identify 3-D shapes, including cubes and other cuboids, from 2-D representations read and write decimal numbers as fractions [for example, 0.71 = 71/100] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents read, write, order and compare numbers with up to 3 decimal places round decimals with 2 decimal places to the nearest whole number and to 1 decimal place solve problems involving number up to 3 decimal places solve problems involving number up to 3 decimal places recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction solve problems which require knowing percentage and decimal equivalents of 1/2 , 1/4 , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25 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	

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		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		complete, read and interpret information in tables, including timetables.		involving simple rates 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, 2/5 + 4/5 = 6/5 = 1 1/5] add and subtract fractions with the same denominator, and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction		draw given angles, and measure them in degrees (°) identify: angles at a point and 1 whole turn (total 360°) angles at a point on a straight line and half a turn (total 180°) other multiples of 90° 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 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 convert between different units of metric measure understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes estimate volume and capacity use all four operations to solve problems involving measure using decimal notation including scaling. solve problems involving converting between units of time	

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	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
	Key Fluency Facts	Decimal number bonds to 1 and 10.	Multiplication and division facts for all times tables up to 12 × 12 Recall square numbers up to 12^2 and their square roots.	Recall metric conversions.	Identify prime numbers up to 20.	Doubles and halves of All numbers to 100 All multiples of 10 to 10,000 All multiples of 100 to 10,000	Find factor pairs of a number. Tests of divisibility for 2, 3, 5, 9 and 10.
	Key Fluency Skills	**Consolidate** Place value **Recap** number bonds **Recap** double and halving **Recite** multiplication and division facts **Identify** and **recap** factors **Convert** between different measures **rounding** **Recite** squared numbers, fractions and decimals **Multiply by 10, 100, 1000** **Find** fraction/percentage of an amount **Recap** number lines **Solve** calculations involving BODMAS **Identify** prime numbers **Revise** angles **Calculate** area and perimeter Revisit previously taught key fluency skills		**Consolidate** Place value **Recap** number bonds **Recap** double and halving **Recite** multiplication and division facts **Identify** and **recap** factors **Convert** between different measures **rounding** **Recite** squared numbers, fractions and decimals **Multiply by 10, 100, 1000** **Find** fraction/percentage of an amount **Recap** number lines **Solve** calculations involving BODMAS **Identify** prime numbers **Revise** angles **Calculate** area and perimeter Revisit previously taught key fluency skills		**Consolidate** Place value **Recap** number bonds **Recap** double and halving **Recite** multiplication and division facts **Identify** and **recap** factors **Convert** between different measures **rounding** **Recite** squared numbers, fractions and decimals **Multiply by 10, 100, 1000** **Find** fraction/percentage of an amount **Recap** number lines **Solve** calculations involving BODMAS **Identify** prime numbers **Revise** angles **Calculate** area and perimeter Revisit previously taught key fluency skills	
Year 6	**Topic(s) (Application Topics)**	**Number and Place Value** **Four Operations** **Statistics**		**Algebra** **Fractions** **Measurement**		**Statistics** **Geometry** **Ratio and Proportion**	
	Skills	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		use simple formulae generate and describe linear number sequences express missing number problems algebraically find pairs of numbers that satisfy an equation with 2 unknowns		interpret and construct pie charts and line graphs and use these to solve problems describe positions on the full coordinate grid (all 4 quadrants) draw and translate simple shapes on the coordinate	

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Knowledge and Skills Curriculum Overview

	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		intervals across 0 solve number and practical problems that involve all of the above 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 numbers identify common factors, common multiples and prime numbers use their knowledge of the order of operations to carry out calculations involving the 4 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		enumerate possibilities of combinations of 2 variables use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions >1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8] divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6] associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places multiply one-digit numbers with up to 2 decimal places by whole numbers use written division methods in cases where the answer has up to 2 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 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 3 decimal		plane, and reflect them in the axes solve problems involving the relative sizes of 2 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 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 3 decimal places solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate 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	

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Knowledge and Skills Curriculum Overview

	Guidance Areas	Autumn		Spring		Summer	
		Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
		calculate and interpret the mean as an average.		places solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate		extending to other units convert between miles and kilometres	
	Key Fluency Facts	Use times table facts to multiply and divide decimals	Identify common factors of a pair of numbers.	Convert between decimals, fractions and percentages.	Identify prime numbers up to 50.	Doubles and halves of 2 digit decimals.	Tests of divisibility for 4 and 6.
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Please note: some of the topics may carry over into the next term.