The Oak Tree Federation

Maths –Curriculum Progression Map

The curriculum progression for The Oaktree Federation has been designed from the National Curriculum and White Rose Maths. The objectives cover the skills and knowledge children will learn through primary school.

Term 1 and 2							
	YR	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Representations	Concrete objects Number blocks Numicon 2-sided counters Bead strings Dice	Concrete objects Number line Tens frames Numicon Base 10 2-sided counters Bead strings Playing cards Dice	Place value chart Number lines Base 10 Part whole Tens frames Numicon 2-sided counters Bead strings Playing cards Dice	Place value chart Number lines Base 10 Part whole Numicon Place value counters 2-sided counters Playing cards Dice	Place value chart Number lines Base 10 Part whole Place value counters Squares 2-sided counters Playing cards Dice	Place value chart Number lines Base 10 Place value counters Part whole Gattegno chart Bar model 2-sided counters Fraction walls Playing cards Dice	Place value chart Number lines Base 10 Place value counters Part whole Gattegno chart Bar model 2-sided counters Fraction walls Playing cards Dice
Key Vocabulary	Numeral Number Partition Quantity Subitise More Less	Fewer Less More Same Greater than Less than Equal to Count on Count backwards Number sentences Fact families 2D and 3D shape names and properties	Partition Tens and ones Estimate Compare Greater than Less than Equal to Edges Shape names (2-D / 3-D) Vertices Symmetry Vertical Pattern	Partition Hundreds, Tens and ones Estimate Compare Greater than Less than Equal to Sum Add Subtract Inverse Multiples Equal groups	Partition Estimate Compare Greater than Less than Equal to Sum Add Subtract Inverse Multiply Divide Product Area cm^2 / m^2 etc	Digit Value Greater than Less than Equal to Round Ascending Descending Powers 10, 100, 1000 times smaller / bigger Factors Prime Square Cube	Digit Value Greater than Less than Equal to Round Ascending Descending Powers Negative Integer Common multiples Common factors Prime Long division Long multiplication
Place Value	Find, match ad objects which are the same	**Term 1 focus on numbers to 10**	**<u>Counting</u>** count in steps of 2, 3, and 5 from 0, and in	**<u>Counting</u>** count from 0 in multiples of 4, 8, 50	**<u>Counting</u>**	**<u>Counting</u>** count forwards or backwards in steps of	**<u>Counting</u>**

	Compare sets of items using the language of more/fewer/same Compare amounts Representing and comparing 1, 2, 3 Representing numbers to 5 One more and one less Compare size/mass/capacity Shapes with four sides Time – night and day	**Counting** count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals count in multiples of twos, fives and tens **Comparing numbers** **Identifying, representing and estimating numbers** identify and represent numbers using objects and pictorial representations **Reading and writing numbers** read and write numbers from 1 to 20 in numerals and words **Understanding place value**	10s from any number, forward and backward **Comparing numbers** compare and order numbers from 0 up to 100; use <, > and = signs **Identifying, representing and estimating numbers** identify, represent and estimate numbers using different representations, including the number line **Reading and writing numbers** read and write numbers to at least 100 in numerals and in words **Understanding place value** recognise the place value of each digit in a two-digit number (10s, 1s)	and 100; find 10 or 100 more or less than a given number **Comparing numbers** compare and order numbers up to 1,000 **Identifying, representing and estimating numbers** identify, represent and estimate numbers using different representations **Reading and writing numbers** **Understanding place value** recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) solve number problems and practical problems involving these ideas	find 1,000 more or less than a given number count backwards through 0 to include negative numbers count in multiples of 1000 **Comparing numbers** order and compare numbers beyond 1,000 **Identifying, representing and estimating numbers** identify, represent and estimate numbers using different representations round any number to the nearest 10, 100 or 1,000 **Reading and writing numbers** read Roman numerals to 100 **Understanding place value** recognise the place	powers of 10 for any given number up to 1,000,000 **Comparing numbers** Compare and order numbers to at least 1000000 **Identifying, representing and estimating numbers** round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 **Reading and writing numbers** read Roman numerals to 1,000 and recognise years written in Roman numerals read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit **Understanding place value** solve number problems and practical problems that involve all of the above	use negative numbers in context, and calculate intervals across 0 **Comparing numbers** order and compare numbers up to 10,000,000 and determine the value of each digit **Identifying, representing and estimating numbers** round any whole number to a required degree of accuracy **Reading and writing numbers** Read and write numbers up to 10,000,000 and determine the value of each digit **Understanding place value** solve number and practical problems that involve all of the above

		given a number identify one more and one less	use place value and number facts to solve problems		value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) solve number and practical problems that involve all of the above and with increasingly large positive numbers		
Addition and subtraction		**For Term 1 work with numbers to 10** **Number bonds** represent and use number bonds and related subtraction facts **Mental calculation** **Written methods** read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs **Inverse operations, estimating and checking answers**	**Number bonds** recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 **Mental calculation** 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 **Written methods**	**Number bonds** **Mental calculation** add and subtract numbers mentally, including: • a three-digit number and 1s • a three-digit number and 10s • a three-digit number and 100s **Written methods** add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction **Inverse operations, estimating and checking answers**	**Number bonds** **Mental calculation** **Written methods** add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate **Inverse operations, estimating and checking answers** estimate and use inverse operations to check answers to a calculation **Problem solving** solve addition and subtraction two-step	**Number bonds** **Mental calculation** add and subtract numbers mentally with increasingly large numbers **Written methods** add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) **Inverse operations, estimating and checking answers** use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	**Number bonds** **Mental calculation** perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the 4 operations **Written methods** **Inverse operations, estimating and checking answers** use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

		Problem solving solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9	**Inverse operations, estimating and checking answers** 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 **Problem solving** solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	estimate the answer to a calculation and use inverse operations to check answers **Problem solving** solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	problems in contexts, deciding which operations and methods to use and why	**Problem solving** solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	**Problem solving** solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Multiplication and Division				**Multiplication and division facts** **RECAP**: count from 0 in multiples of 4, 8,	**Multiplication and division facts** recall multiplication and division facts for	**Multiplication and division facts** **RECAP:** count forwards or backwards	**Multiplication and division facts** **Mental calculation**

				50 and 100; find 10 or 100 more or less than a given number **Mental calculation** recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **Written calculation** **Properties of numbers: multiples, factors, primes, square and cube numbers** **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving**	multiplication tables up to 12 × 12 **Mental calculation** 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 **Written calculation** **Properties of numbers: multiples, factors, primes, square and cube numbers** **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving**	in steps of powers of 10 for any given number up to 1,000,000 **Mental calculation** multiply and divide numbers mentally, drawing upon known facts **Written calculation** **Properties of numbers: multiples, factors, primes, square and cube numbers** identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) establish whether a number up to 100 is prime and recall prime numbers up to 19 know and use the vocabulary of prime	perform mental calculations, including with mixed operations and large number **Written calculation** 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 **Properties of numbers: multiples, factors,**

						numbers, prime factors and composite (non-prime) numbers **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving** solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes	**primes, square and cube numbers** identify common factors, common multiples and prime numbers **Order of operations** use their knowledge of the order of operations to carry out calculations involving the 4 operations **Inverse operations, estimating and checking answers** **Problem solving** solve problems involving addition, subtraction, multiplication and division
Fractions						**Counting in fractional steps** **Recognising fractions** identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert	**Counting in fractional steps** **Recognising fractions** **Comparing fractions** compare and order fractions, including fractions >1 **Calculating fractions** use common factors to simplify fractions; use common multiples to

						from one form to the other **Comparing fractions** compare and order fractions whose denominators are all multiples of the same number **Calculating fractions** add and subtract fractions with the same denominator, and denominators that are multiples of the same number **Problem solving**	express fractions in the same denomination 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 divide proper fractions by whole numbers **Problem solving**
Measurement					**Comparing and Estimating:** **Measuring and Calculating:** find the area of rectilinear shapes by counting squares		**Comparing and Estimating:** **Measuring and Calculating:** 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
Geometry		**<u>Identifying shapes and their properties</u>** 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]. **<u>Identifying shapes and their properties</u>**	**<u>Identifying shapes and their properties</u>** identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. Recognise and name common 3-D shapes (for example cubes, pyramids and spheres)				

			<u>Drawing and constructing</u> **<u>Comparing and classifying:</u>** Compare and sort common 2-D and 3-D shapes and everyday objects compare and sort common 2-D and 3-D shapes and everyday objects				

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Term 3 and 4							
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Representations	Scales Tens frames Number blocks 3D shapes Number cards Containers Dice Part-whole 2-sided counters	Tens frames Part- whole models Rulers Scales 2-sided counters Playing cards Dice	Money Rulers Counters Arrays 2-sided counters Playing cards Dice	Number lines Place value columns Part – whole models Rulers 2-sided counters Cuisenaire rods	Counters Squared paper Place value columns 2-sided counters Cuisenaire rods	Counters Squared paper Place value columns Two-way tables Timetables Line graphs 2-sided counters Cuisenaire rods	Pie charts Line graphs Counters 2-sided counters Cuisenaire rods
Key Vocabulary	Nothing there All gone The same as More Fewer Tall Thin Narrow Wide Shallow Equal to Heavier than Lighter than Heaviest Lightest Subitise Compare 3D shape names	long/short, longer/shorter, tall/short double/half heavy/light heavier than lighter than full/empty more than less than half half full quarter quicker, slower, earlier, later	Multiply Divide Array long/short, longer/shorter, tall/short degrees (°C) grams kilograms pounds pence	Scaling Multiply Divide Exchange Length cm / mm / m Twice Equivalent Perimeter Numerator Denominator Tenths	Multiples Factors Factor pairs Formal written method Efficient methods Perimeter cm / m / Rectilinear shapes Polygons Area Compare	Short division Compound shapes Estimate Area Rectilinear shapes Perimeter Polygons	Line graphs Mean Average Pie charts Percentages
Addition and subtraction		**Work within numbers to 20** **<u>Number bonds</u>** represent and use number bonds and related subtraction facts					

		Mental calculation **Written methods** read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs **Inverse operations, estimating and checking answers** **Problem solving** solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9					
Multiplication and Division			**Multiplication and division facts** recall and use multiplication and division facts for the	**Multiplication and division facts** **Mental calculation**	**Multiplication and division facts** **Mental calculation**	**Multiplication and division facts** **Mental calculation**	**Multiplication and division facts** **Mental calculation**

			2, 5 and 10 multiplication tables, including recognising odd and even numbers **Mental calculation** **Written calculation** calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs **Properties of numbers: multiples, factors, primes, square and cube numbers** **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving**	**Written calculation** 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 **Properties of numbers: multiples, factors, primes, square and cube numbers** **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving** solve problems, including missing number problems, involving multiplication and	**Written calculation** multiply two-digit and three-digit numbers by a one-digit number using formal written layout **Properties of numbers: multiples, factors, primes, square and cube numbers** recognise and use factor pairs and commutativity in mental calculations **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving**	**Written calculation** 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 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 **Properties of numbers: multiples, factors, primes, square and cube numbers** **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving** solve problems involving addition, subtraction, multiplication and division and a	**Written calculation** **Properties of numbers: multiples, factors, primes, square and cube numbers** **Order of operations** **Inverse operations, estimating and checking answers** **Problem solving**

			solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects		combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
Fractions				**Counting in fractional steps** 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 **Recognising fractions** recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators **Comparing fractions** **Calculating fractions**	**Counting in fractional steps** count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 **Recognising fractions** recognise and show, using diagrams, families of common equivalent fractions **Comparing fractions** recognise and show, using diagrams, equivalent fractions with small denominators **Calculating fractions**	**Counting in fractional steps** **Recognising fractions** **Comparing fractions** **Calculating fractions** multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams **Problem solving**	**Counting in fractional steps** **Recognising fractions** **Comparing fractions** **Calculating fractions** associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] **Problem solving** recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

				Problem solving	add and subtract fractions with the same denominator **Problem solving** 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		
Decimals and Percentages					**Comparing decimals** **Rounding including decimals** **Equivalence (including fractions, decimals and percentages)** **Multiplication and division of decimals** 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 **Problem solving**	**Comparing decimals** read, write, order and compare numbers with up to three decimal places **Rounding including decimals** round decimals with two decimal places to the nearest whole number and to one decimal place **Equivalence (including fractions, decimals and percentages)** read and write decimal numbers as fractions [for example, 0.71 = 100 71]	**Comparing 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 **Rounding including decimals** **Equivalence (including fractions, decimals and percentages)** **Multiplication and division of decimals** multiply one-digit numbers with up to two decimal places by whole numbers

						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 **Multiplication and division of decimals** **Problem solving** solve problems involving number up to three decimal places solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{2}{5}$ $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	use written division methods in cases where the answer has up to two decimal places **Problem solving** solve problems which require answers to be rounded to specified degrees of accuracy solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison **Ratio and Proportion** 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 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
Algebra							**<u>Equations</u>** express missing number problems algebraically enumerate possibilities of combinations of 2 variables find pairs of numbers that satisfy an equation with 2 unknowns **<u>Formulae</u>** use simple formulae RECAP: recognise when it is possible to use formulae for area and volume of shapes **<u>Sequences</u>** generate and describe linear number sequences
Measurement		**<u>Comparing and Estimating:</u>** compare, describe and solve practical problems for: • lengths and heights • mass/weight • capacity and volume	**<u>Comparing and Estimating:</u>** compare and order lengths, mass, volume/capacity and record the results using >, < and = **<u>Measuring and Calculating:</u>**	**<u>Comparing and Estimating:</u>** compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **<u>Measuring and Calculating:</u>**	**<u>Comparing and Estimating:</u>** Convert between different units of measure Measure and calculate the perimeter of a rectilinear figure (including squares) in	**<u>Comparing and Estimating:</u>** 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	**<u>Comparing and Estimating:</u>** recognise that shapes with the same areas can have different perimeters and vice versa **<u>Measuring and Calculating:</u>**

		Measuring and Calculating: measure and begin to record the following: • lengths and heights • mass/weight • capacity and volume	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 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	Measure lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes	centimetres and metres Estimate, compare and calculate different measures (also appears in measuring and calculating) **Measuring and Calculating:** Estimate, compare and calculate different measures	**Measuring and Calculating:** measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	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].

Statistics							**<u>Interpreting, Constructing and Presenting Data</u>** interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average.

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Term 5 and 6							
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Representations	Tens frame Bead strings Dice Dominoes Towers of cubes Rekenreks Number tracks Tangrams Geo boards	Clocks Calendars Grids Arrays Counters Number lines Bar models Visual fraction representations	Bar models Visual fraction representations Clocks Graphs (pictograms) Tally charts	Bar models Visual fraction representations 2-D shapes 3-D shapes Angles Rulers Clocks Bar graphs Pictograms Tables	Place value charts Money Number lines Clocks Calendars Pictograms Tables Line graphs	Place value charts Scales Rulers Number lines Protractors Timetables / tables Line graphs Thermometers	Circles Co-ordinate grids Nets of shapes Mirrors Tracing paper
Key Vocabulary	Subitise Count on Count back Positional language Add Subtract Twice as many Double Sharing Grouping Even Odd	(un)equal groups Half / quarter Hour / minute / seconds Half an hour 0'clock Quarter past/to Days Months Full turn Half turn Quarter turn Three-quarter turn Clockwise Anti-clockwise Positional language	Half / quarter / third (non) unit fractions Half / quarter Hour / minute / seconds Half an hour 0'clock Quarter past/to < > = Data Full turn Half turn Quarter turn Three-quarter turn Clockwise Anti-clockwise	Horizontal Vertical Perpendicular Parallel Half-turn Three quarters Complete turn Greater than Less than Acute Obtuse Right angle Degrees names of shapes Hour / minute / seconds Data (non) unit fractions	Decimal Tenths Hundredths Round analogue digital hours / minutes / seconds / years / months/ weeks / days 12 / 24 hour clock a.m. / p.m. Acute Obtuse Right angle Degrees quadrilaterals triangles	mm / cm / m / km ml / l g / kg Metric Imperial Inches Pounds Pints Negative line graph tables timetables Acute Obtuse Right angle Degrees	Circles Radius Diameter Circumference Co-ordinates Quadrants Translate Reflect Protractor Degrees Nets Vertical Horizontal Straight line
Place Value	Build numbers beyond 10 Count patterns beyond 10					**Counting** interpret negative numbers in context, count forwards and backwards with positive	

	Spatial reasoning (1) – select and rotate shapes in a given space. Match, rotate, manipulate – use positional language Adding more Taking away Spatial reasoning (2) – combining shapes to make new shapes Compose and decompose – combining shapes in different ways Doubling Sharing & grouping Even & odd Spatial reasoning (3) - replicate simple constructions, models, real places and places in stories					and negative whole numbers, including through 0	
Multiplication and Division		**Problem solving** 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.					
Fractions		**Counting in fractional steps** **Recognising fractions** 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. **Comparing fractions**	**Counting in fractional steps** **Recognising fractions** recognise, find, name and write fractions 1/3 1/3 2/4 and ¾ of a length, shape, set of objects or quantity **Comparing fractions** write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½	**Counting in fractional steps** **Recognising fractions** 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			

	Visualise & build Consolidate learning - problem solving and develop their critical thinking skills Patterns and relationships - relationships between numbers and shapes Spatial reasoning (4) – use maps and plans to represent places Mapping - create their own maps to represent the models they build, familiar places and places in stories	**<u>Calculating fractions</u>** **<u>Problem solving</u>**	**<u>Calculating fractions</u>** **<u>Problem solving</u>**	**<u>Comparing fractions</u>** compare and order unit fractions, and fractions with the same denominators **<u>Calculating fractions</u>** **<u>Problem solving</u>** solve problems that involve all of the above (including term 1 & 2 objectives).			
Decimals and Percentages					**<u>Comparing decimals</u>** compare numbers with the same number of decimal places up to 2 decimal places **<u>Rounding including decimals</u>** round decimals with 1 decimal place to the nearest whole number **<u>Equivalence (including fractions, decimals and percentages)</u>** recognise and write decimal equivalents		

					of any number of tenths or hundreds recognise and write decimal equivalents to 1/4 , 1/2 , ¾ **Problem solving** solve simple measure and money problems involving fractions and decimals to 2 decimal places		
Measurement		**Comparing and Estimating:** compare, describe and solve practical problems for: • time **Measuring and Calculating:** 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,	**Comparing and Estimating** compare and sequence intervals of time **Measuring and Calculating:** 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.	**Comparing and Estimating** 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 compare durations of events **Measuring and Calculating:** add and subtract amounts of money to give change, using both £ and p	**Comparing and Estimating:** estimate, compare and calculate different measures, including money in pounds and pence **Measuring and Calculating:** 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.	**Comparing and Estimating:** estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints **Measuring and Calculating:** convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and	

		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. recognise and know the value of different denominations of coins and notes		in practical contexts tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks know the number of seconds in a minute and the number of days in each month, year and leap year		millimetre; gram and kilogram; litre and millilitre) 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.	
Geometry / Position and direction		**<u>Identifying shapes and their properties</u>** **<u>Drawing and constructing</u>** **<u>Comparing and classifying:</u>** **<u>Angles:</u>** **<u>Position and direction</u>** describe position, direction and	**<u>Identifying shapes and their properties</u>** **<u>Drawing and constructing</u>** **<u>Comparing and classifying:</u>** order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to	**<u>Identifying shapes and their properties</u>** identify horizontal and vertical lines and pairs of perpendicular and parallel lines. **<u>Drawing and constructing</u>** draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D	**<u>Identifying shapes and their properties</u>** identify lines of symmetry in 2-D shapes presented in different orientations **<u>Drawing and constructing</u>** complete a simple symmetric figure with respect to a specific line of symmetry.	**<u>Identifying shapes and their properties</u>** identify 3-D shapes, including cubes and other cuboids, from 2-D representations distinguish between regular and irregular polygons based on reasoning about equal sides and angles. **<u>Drawing and constructing</u>**	**<u>Identifying shapes and their properties</u>** recognise, describe and build simple 3-D shapes, including making nets **<u>Drawing and constructing</u>** draw 2-D shapes using given dimensions and angles

		movement, including whole, half, quarter and three-quarter turns	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 anticlockwise) **Angles:**	shapes in different orientations and describe them **Comparing and classifying:** **Angles:** 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	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 **Comparing and classifying:** compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes **Angles:** identify acute and obtuse angles and compare and order angles up to two right angles by size	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. **Comparing and classifying:** use the properties of rectangles to deduce related facts and find missing lengths and angles **Angles:** know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (°) identify: • angles at a point and one whole turn (total 360°) • angles at a point on a straight line and ½ a turn (total 180°) • other multiples of 90°	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius 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. **Comparing and classifying:** compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons **Angles:** recognise angles where they meet at a point, are on a straight line, or are vertically opposite,

							and find missing angles.
Statistics			**<u>Interpreting, Constructing and Presenting Data</u>** 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.	**<u>Interpreting, Constructing and Presenting Data</u>** 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.	**<u>Interpreting, Constructing and Presenting Data</u>** 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	**<u>Interpreting, Constructing and Presenting Data</u>** solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables.	