Progression through the maths curriculum in our school

Rec	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Place Value - Counting							
- Count, recognise and order numbers to 20 -to use one to one correspondence (touch each object and give it a number) -count objects in a line- beginning to count beyond 10 - Understand when counting, numbers are said in a certain order -count actions or objects without physically touching them . Know that the last number said identifies how many are in a set -count objects in a group/ irregular arrangement.	-Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number -Count numbers to 100 in numerals; count in multiples of twos , fives and tens	-Count in steps of 2, 3, and five and from 0 and in tens from any number, forward and backward	-Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	-Count in multiples of 6, 7, 9, 25,1000 Count backwards through zero to include negative numbers	-Count forward or backwards in steps of powers of 10 for any given numbers up to 1 000 000		

(using first same objects/ then different objects) start from a given number name and stop at another. (start with 2, hold it in your head, count on to 8) -count on several numbers from a given number (using fingers to help: count on three numbers from 4)							
Place value- represent							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Identify and represent numbers using objects and pictorial representations	-Identify and represent numbers using objects and pictorial representations -Read and write numbers to 100 in numerals -Read and write numbers from 1 to 20 in numerals and words	-Read and write numbers to at least 100 in numerals and in words -Identify, represent and estimate numbers using different representations, including the number line	-Identify, represent and estimate numbers using different representations -Read and write number up to 1000 in numerals and in words	-Identify, represent and estimate numbers using different representations -Read Roman numerals to200 (I to C) and know that over time, the numeral system changed to include the	-Read and write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit -Read Roman numerals to 1000 (M) and recognise years written in	-Read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit	

				concept of zero and place value	Roman numerals		
Place Value: Use place value and Compare							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Compare quantities of identical and non-identical objects -	Given a number identify one more and one less	Recognise the place value of each digit in a two-digit number (tens, ones) Compare and order numbers from 0 up to 100; use <,> and = signs	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Compare and order numbers up to 1000	Find 1000 more or less than a given number Recognise the place value of each digit in s four-digit number (thousands , hundreds, tens and ones Order and compare numbers beyond 1000	(Read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit	(Read, write) order and compare numbers up to 10 000 000 and determine the value of each digit	-order positive and negative integers, decimals and fractions -use the numberline as a model for ordering integers, decimals and fractions - use the symbols =, ≠, <, >, ≤, ≥ to make order statements about positive and negative integers, decimals and fractions -Understand and use place value for decimals, measures and integers of any size

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Place Value: problems and Rounding							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
		-Use place and value and number facts to solve problems	-Solve number problems and practical problems involving these ideas	-Round any number to the nearest 10, 100 or 1000 -Solve number and practical problems that involve all of the above and with increasingly large positive numbers	-Interpret negative numbers in context -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 involved all of the above	-Round any whole number to a required degree of accuracy -Use negative numbers in context, and calculate intervals across zero -Solve number and practical problems that involve all of the above	-round numbers and measures to different degrees of accuracy, for example to the nearest whole number or to one decimal place - round numbers and measures to an appropriate degree of accuracy, for example to the nearest whole number or to one decimal place - use approximatio n, through

							rounding to the nearest whole number or to one decimal place, to estimate answers -extend their understanding of the number system; make connections between number relationships, and their algebraic and graphical representations

Addition and Subtraction: Recall, Represent, Use

Rec	Y1	Y2	Y3	Y4	Y5	Y6	Y7
-rapid recall of doubles -use of songs and rhymes to do 1 more and 1 less	-Read and write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	-Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	-Estimate the answer to a calculation and use inverse operations to check answers	-Estimate and use inverse operations to check answers to a calculation	-Use rounding to check answers to calculations and determine, in the context of a problem,		

	-Represent and use number bonds related subtraction facts within 20	-Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot -Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number			levels of accuracy		
Addition and Subtraction: calculations							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-recognise and name + and - and = signs -read an addition number sentence -solve an addition number sentence - arrange an addition number sentence -read a subtraction number sentence	-Add and subtract one-digit and two-digit numbers to 20 including zero	-Add and subtract numbers using concrete objects, pictorial representations and mentally, including: A two-digit number and ones A two-digit number an tens Two two-digit numbers Adding three one-digit numbers	-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	-Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	-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	-Perform mental calculations, including with mixed operations and large numbers -Use their knowledge of the order of operation to carry out of calculations involving the four operations	-use the four operations, including formal written methods, applied to integers and decimals; multiply proper and improper fractions, and mixed numbers, all both positive and negative

-solve a subtraction number sentence -calculate by adding 2 single digit numbers and count on or back to find the answer			to three digits, using formal written methods of columnar addition and subtraction				-recognise and use relationships between the operations +, –, ×, ÷, including inverse operations
Addition and Subtraction –Solve Problems							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-use number to solve problems -using concrete objects to sort into groups based on size, colour or shape -Solve problems and know that a group of things changes quantity when something is added or taken away -use language of difference, more/less	-Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9	-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	-Solve problems including missing number problems using number facts, place value, and more complex addition and subtraction	-Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	-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 and a combination of these, including understanding	-Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why	

					the meaning of the equals sign		
Multiplication and Division – Recall, Represent, Use							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-count in tens (recite the sequence ten, twenty, thirty… one hundred.) Do the same backwards -rapid recall of doubles -count patterns involving equal groups	count in twos, fives and tens (recite the sequences and do the same backwards	-Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers -Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	-Recall and use multiplication and division facts for 3, 4 and 8 multiplication tables	-Recall multiplication and division facts for multiplication tables up to 12 x 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	-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 (non-prime) numbers -Establish whether a number up to 100 is prime and recall prime numbers up to 19 -Recognise and use square numbers and cube numbers, and the	-Identify common factors, common multiples and prime numbers -Use estimation to check answers to calculations and determine, in the context of a problem, and appropriation degree of accuracy.	-recognise and use relationships between the operations +, –, ×, ÷, including inverse operations

					notation for squared(^{2})and cubed (^{3})		
Multiplications and Division: Calculations							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
		-Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equal (=) signs	-Write and calculate mathematical statements for multiplication and division using multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	-Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	-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	-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	-use the four operations, including formal written methods, applied to integers and decimals; multiply proper and improper fractions, and mixed numbers, all both positive and negative

					appropriately for the context -Multiply and divide whole numbers and those involving decimals by 10, 100, and 1000	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	
Multiplication and Division: Solve Problems							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-solve real life problems involving doubling, halving and sharing -Represent mathematical	-Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial	-Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication	-Solve problems including missing number problems, involving multiplication and division, including	-Solve problems involving multiplying and adding, including using the distributive law to multiply	-Solve problems involving multiplication and division including using their knowledge of	-Solve problems involving addition, subtraction, multiplication and division	-use the concepts and vocabulary of prime numbers, factors (or divisors), multiples,

thinking through pictures and drawings	representation and arrays with the support of the teacher	and division facts, including problems in contexts	positive integer scaling problems and correspondence problems In which n objects are connected to m objects	two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	factors and multiples, squares and cubes Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates		common factors, common multiples, highest common factor, lowest common multiple use square, cube, square root and cube root
Multiplication and Division – Combined Operations							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
					-Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	-Use their knowledge of the order of operations to carry out calculations involving the four operations	-use conventional notation for the priority of operations, including brackets -recognise and use relationships between the operations +, –, ×, ÷, including inverse operations - express one quantity as a whole-

							number multiple of another, and by reversing the expression of the same relationship express one quantity as a unit fraction of another
Fractions: Recognise and Write							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-share a quantity of objects between two. -Identify half a group of objects -Identify half a shape (not always circular) -Put together halves to make whole shapes -Break an object in half -Begin to count to ten in halves. (zero, half, one, one and a half, two, two and a half, three, three and a half…)	-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	-Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity	-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	-Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	-Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths -Recognise mixed numbers and improper fractions and covert from one form to the other and write mathematical statements > 1 as a mixed number [for		

			numbers: unit fractions and non-unit fractions with small denominators		example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]		
Fractions: Compare							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
.		-Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	-Recognise and show, using diagrams, equivalent fractions with small denominators -Compare and order unit fractions, and fractions with the same denominators	-Recognise and show, using diagrams, families of common equivalent fractions	-Compare and order fractions whose denominators are all multiples of the same number	-Use common factors to simplify fractions; use common multiples to express fractions in the same denomination -Compare and order fractions; including fractions >1	-define percentage as 'number of parts per hundred', and know their decimal and fraction equivalents -work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 and 3/8) express one quantity as a whole-number multiple of another, and

							by reversing the expression of the same relationship express one quantity as a unit fraction of another
Fractions: Calculations							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
Can recognise 'fair share' of an item e.g. a banana or a set of objects -can describe a part and a whole e.g. a piece of cake / pizza and a whole cake / pizza		-Write simple fractions for example, $\frac{1}{2}$ of 6 = 3	-Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]	-Add and subtract fractions with the same denominator	-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	-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 the simplest form [for example, $\frac{1}{4} x \frac{1}{2} = \frac{1}{8}$] Divide proper fractions by whole numbers [for	

						example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	
Fractions: Solve Problems							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
			-Solve problems that involve all of the above	-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			-recognise and use relationships between the operations +, –, ×, ÷, including inverse operations - express one quantity as a whole-number multiple of another, and by reversing the expression of the same relationship express one quantity as a unit fraction of another
Decimals: Recognise and Write							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
				-Recognise and write decimal	-Read and write decimal numbers as	-Identify the value of each digit in	

				equivalents of any number of tenths or hundredths -Recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$	fraction [for example, $0.71=\frac{71}{100}$] -Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	numbers given to three decimal places	
Decimals: Compare							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
				-Round decimals with one decimal place to nearest whole number -Compare numbers with the same number of decimal places up to two decimal places	-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		

Decimals: Calculations and Problems							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
				-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	-Solve problems involving number up to three decimal places	-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	
Fractions, Decimals and Percentages							

Rec	Y1	Y2	Y3	Y4	Y5	Y6	Y7
				-Solve simple measures and money problems involving fractions and decimals to two 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 $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25	-Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] -Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	-define percentage as 'number of parts per hundred', and know their decimal and fraction equivalents -work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 and 3/8) express one quantity as a whole-number multiple of another, and by reversing the expression of the same relationship express one quantity as a unit fraction of another

Ratio and Proportion							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
						-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	-express one quantity as a whole-number multiple of another, and by reversing the expression of the same relationship express one quantity as a unit fraction of another - understand that a multiplicative relationship between two quantities that can be expressed as a ratio of the form 1 : n where n is an integer can also be expressed as the unit fraction 1/n - use ratio notation, including

						known or can be found -Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	reduction to simplest form - use scale factors of scale diagrams and maps in everyday contexts - relate the language of ratios and the associated calculations to the arithmetic of fractions - relate dividing a given quantity into two parts in a given part:whole ratio to finding a fraction of a quantity; relate part:part ratios of quantities to the correspondin g part:whole ratios

							-use the idea of compound units (A 'per' B), as in unit pricing, to solve problems
Algebra							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Problem solving that involves sequencing and recognising patterns	Solve on-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= □ - 9	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	Solve problems including missing number problems			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	use and interpret algebraic notation, including: ab in place of a × b, 3y in place of y + y + y and 3 × y a2 in place of a × a, a3 in place of a × a × a; a2b in place of a × a × b a/b in place of a ÷ b brackets - understand the correct and incorrect use of '='; understand and use the concepts and vocabulary of expressions,

							equations, inequalities, terms and factors - simplify and manipulate algebraic expressions to maintain equivalence by: -collecting like terms -multiplying a single term over a bracket -use algebraic methods to solve linear equations in one variable - interpret simple linear mathematical relationships, such as y equals 5 times x or p is 3 more than twice q, both algebraically and graphically

							-substitute positive integer values into formulae and expressions, including scientific formulae - understand and use standard mathematical formulae -model simple situations or procedures involving two variables by translating them into linear algebraic expressions or formulae and by using graphs - generate terms of a sequence with a simple linear position-to-term rule (such as ‘an expression

							for the value of the nth term is n + 2') from either the term-to-term or the position-to-term rule
Measurement: Using Measures							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
use every day language to compare quantities and objects. order two items by mass (using everyday language) order two or three items by length or height. use everyday language to compare quantities and objects and talk about distance. order two items by capacity (using everyday language). -order and sequences familiar events.	-Compare, describe and solve practical problems for: • Lengths and heights [for example, long/ short, longer/ shorter, tall/ short, double/half] • 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	-Choose and use appropriate standard units to estimate and measure lengths/ height in any direction (m/cm); mass (kg/g); temperature (℃); 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 =	-Measure and compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/ capacity (l/ml)	-Convert between different units of measure [for example, kilometre to metre; hour to minute] Estimate, compare and calculate different measures	-Convert between different units of metric measure (for example, kilometre and metre centimetre and metre ; centimetre and millimetre; gram and kilogram; litre and millilitre) -Understand and use approximate equivalences between metric units and common imperial units such as	-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	-change freely between related standard units, for example: time (4 hours = 4 × 360 seconds), length (7 mm = 7 × 0.1 cm), area (9 m2 = 9 × 10000 cm2), volume/capacity (3 mm3 = 3 x 0.001 cm3) , mass (5 kg = 5 × 1000 g) - use standard units of

-use everyday language related to time (days of week & begins to identify o'clock). use everyday language to talk about money. demonstrates understanding that £1 has greater value than pennies. know and name different coins – 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2. can use 1p, 5p and 10p coins to make amounts up to 20	• Time [for example, quicker, slower, earlier, later] -Measure and begin to record the following: Lengths and heights Mass/weight Capacity and volume Time(hours, minutes, seconds)				inches, pounds and pints -Use all four operations to solve problems involving measure [for example, length, mass, volume, money]using decimal notation, including scaling	of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places -Convert between miles and kilometres	mass, length, time, money and other measures, including with decimal quantities
Measurement: Money							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Understand that coins can be used to buy things -Use coins in real life and practical contents -recognise names and	-Recognise and know the value of different denominations of coins and notes	-Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value -Find different combinations of coins that equal	-Add and subtract amounts of money to give change, using both £ and p in practical contexts	-Estimate, compare and calculate different measures, including money in pounds and pence	-Use all four operations to solve problems involving measure [for example money]		

know the value of different coins -Know an item can be used to represent more than one object e.g. 2p coin		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					
Measurement: Time							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Measure short periods of time in different ways	-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 -Tell the time to the hour and half past the hour and draw the hand on a clock face to show these times	-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	-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,	-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	-Solve problems involving converting between units of time	-Use, read, write and convert, between standard units, converting measurement of time from a smaller unit, and vice versa	

			afternoon, noon, and midnight -Know the number of seconds in a minute and the number of days in a month, year and leap year -Compare durations of events [for example to calculate the time taken by particular events and tasks]				
Measurement: Perimeter, Area, Volume							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
			-Measure the perimeter of simple 2-D shapes	-Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares	-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,	-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	- derive and apply formulae to undertake calculations and solve problems involving perimeter and area of rectangles

					square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes -Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	-Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]	
Geometry: 2-D shapes							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Select a particular named shape -Begins to use mathematical names and 'flat' 2D shapes. -Use familiar objects and common shapes to create and recreate patterns.	-Recognise and name common 2-D shapes [for example, rectangles (including square), circles and triangles	-Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line -Identify 2-D shapes of the surface of 3-D shapes, [for example a circle on a cylinder and a	-Draw 2-D shapes	-Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes -Identify lines of symmetry in 2-D shapes presented in	-Distinguish between regular and irregular polygons based on reasoning about equal sides and angels. -Use the properties of triangles to deduce related	-Draw 2-D shapes using given dimensions and angles -Compare and classify geometric shapes based on their properties and sizes	-describe, sketch and draw: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively

-Use mathematical terms to describe 2-D shapes. -Recognise, create and describe patterns. -Use everyday language to solve problems.-explores characteristics of/uses mathematical language for everyday objects and shapes. -Understand that regular and irregular shapes can be categorised and ordered in different ways e.g. size, number of sides -Order and arrange combinations of shapes in patterns and sequences -Understand that a shape		triangle on a pyramid -Compare and sort common 2-D shapes and everyday objects		different orientations	facts and find missing lengths and angles	-Illustrate and name parts of circles , including radius, diameter and circumferenc e and know that the diameter is twice the radius	and rotationally symmetric; use conventional terms and notations, such as using 'dashes' to indicate equal lengths and (multiple) arrows to indicate parallel lines - use the standard conventions for labelling the sides and angles of triangle ABC

doesn't change when it's in a different orientation e.g. a rotated square							
Geometry:3-D Shapes							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Recognise common 3-d shapes e.g. cylinders, cubes, cuboids, spheres -Know that 2-d shapes can be made from the faces of a 3D shape	-Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	-Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. Compare and sort common 3-D shapes and everyday objects	-Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them		-Identify 3-D shapes including cubes and other cuboids, from 2-D representations	-Recognise, describe and build simple 3-D shapes, including making nets	
Geometry: Angles and Lines							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-			-Recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angels makes a half-tur, three make three quarters of a turn and four a complete turn;	-Identify acute and obtuse angles and compare and order angles up to two right angels by size Identify lines of symmetry in 2-D shapes presented different orientations	-Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles -Draw given angles, and measure them in degrees -Identify:	Find unknown angles in any triangles, quadrilaterals, and regular polygons Recognise angles where they meet at a point, are on a straight line, or are vertically	-derive and illustrate properties [for example, equal lengths and angles] of triangles, quadrilaterals, and other plane figures using appropriate language and technologies

			identify whether angles are greater than or less than a right angle -Identify horizontal and vertical lines and pairs of perpendicular and parallel	-Complete a simple symmetric figure with respect to a specific line of symmetry	Angles at a point and one whole turn (total $360°$) Angles at a point on a straight line and $\frac{1}{2}$ a turn (total $180°$) Other multiples of $90°$	opposite, and find missing angels	--apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles - draw and measure line segments and angles in geometric figures; calculate lengths represented by line segments in scale drawings given scale factors as ratios in the form 1 : n, and understand that the lengths are approximate
Geometry: Position and Direction							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
-Can say what is different and what is the same.	-Describe position, direction and movement, including whole, half	-Order and arrange combinations of mathematical		-Describe positions on a 2-D grid ad coordinates in	-Identify, describe and represent the position of	-Describe positions on the full coordinate	-work with coordinates in all four quadrants

-Begins to categorise according to properties such as size. -Uses positional language ('below', 'above', 'next to', 'beside', 'in front', 'behind' and 'on top' -Describes their relative position such as 'behind' or 'next to'. -Uses everyday language to talk about position . -Uses everyday language to solve problems.	and quarter and three-quarter turns **Summer 3**	objects in patters 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)		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	shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	grid (all four quadrants) -Draw and translate simple shapes on the coordinate plane. And reflect them in the axes	-model simple situations or procedures involving two variables by translating them into linear algebraic expressions or formulae and by using graphs - apply translations, rotations and reflections to given figures, and identify examples of translations, rotations and reflections (for example, be able to pick out from a group of shapes those that are translations, rotations or reflections of a given shape)
Statistics: Present and Interpret							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**

		-Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	-Interpret and present data using bar charts, pictograms and tables	-Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	-Complete, read and interpret information in tables including timetables	-Interpret and construct pie charts and line graphs and use these to solve problems	- produce graphs of linear functions of one variable with appropriate scaling, using equations in x and y and the Cartesian plane - use linear graphs to estimate values of y for given values of x and vice versa - from given linear graphs find approximate answers to simple contextual questions - construct and interpret frequency tables, bar charts, pie charts, and pictograms for simple categorical

							data, and vertical line (or bar) charts for small sets of ungrouped numerical data and numerical data grouped into a small number of groups
Statistics: Solve Problems							
Rec	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
		-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	-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	-Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	-Solve comparison sum and difference problems using information presented in a line graph	-Calculate and interpret the mean as an average	-describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, including grouped, data; and appropriate measures of central tendency (mean, mode,

							median) and spread (range) - describe mathematical relationships between two variables that are easily visible in the data derived from experiments or observations