BISHOP LONSDALE CHURCH OF ENGLAND PRIMARY SCHOOL AND NURSERY

BECOMING INDEPENDENT SUCCESSFUL HONEST OPEN-MINDED PEOPLE

End points: Maths

Number and Place Value							
Counting							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
I can use counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence.	I can count objects, actions and sounds.	I can can count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			I can count backwards through zero to include negative numbers	I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	I can use negative numbers in context, and calculate intervals across zero
I can count in everyday contexts, sometimes skipping numbers - '1-2-3-5.'	I can an count beyond ten.	I can count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	I can count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	I can count from 0 in multiples of 4, 8, 50 and 100;	I can count in multiples of 6, 7, 9, 25 and 1000	I can count forwards or backwards in steps of powers of 10 for any given number up to 1000 000	
I can recite numbers past 5.	I understand the 'one more than/one less than' relationship between consecutive numbers.	I can identify one more and one less when given a number		I can find 10 or 100 more or less than a given number	I can find 1000 more or less than a given number		
I can say one number for each item in order: 1,2,3,4,5.	I can verbally count beyond 20, recognising the pattern of the counting system.						
Comparing Numbers							
I can compare amounts, saying 'lots', 'more' or 'same'.	I can compare numbers.	I can use the language of: equal to, more than, less than (fewer), most, least	I can compare and order numbers from 0 up to 100; use <, > and = signs	I can compare and order numbers up to 1000	I can order and compare numbers beyond 1000	I can read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
I can compare quantities using language: 'more than', 'fewer than'.	I can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.				I can compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)		

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End points: Maths

Identifying, representing and estimating numbers							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
I can show 'finger numbers' up to 5.	I can link the number symbol (numeral) with its cardinal number value.	I can identify and represent numbers using objects and pictorial representations including the number line	I can identify, represent and estimate numbers using different representations, including the number line	I can identify, represent and estimate numbers using different representations	I can identify, represent and estimate numbers using different representations	I can identify, represent and estimate numbers using different representations	I can identify, represent and estimate numbers using different representations
I can link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	I can explore the composition of numbers to 10.						
Reading and writing numbers (including roman numerals)							
I can take part in finger rhymes with numbers.		I can read and write numbers from 1 to 20 in numerals and words.	I can read and write numbers to at least 100 in numerals and in words	I can read and write numbers up to 1000 in numerals and in words		I can read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Comparing Numbers)	I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Understanding Place Value)
I have Fast recognition of up to 3 objects, without having to count them individually ('subitising').	I can subitise (recognise quantities without counting) up to 5.			I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (copied from Measurement)	I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	I can use some number names accurately in play.
Understanding place value							
I react to changes of amount in a group of up to three items.	I have a deep understanding of number to 10, including the composition of each number.		I can recognise the place value of each digit in a two-digit number (tens, ones)	I can recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	I can recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	I can read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').						I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (copied from Fractions)	

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End points: Maths

Rounding							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
					I can round any number to the nearest 10, 100 or 1 000	I can round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000	I can round any whole number to a required degree of accuracy
					I can round decimals with one decimal place to the nearest whole number (copied from Fractions)	I can round decimals with two decimal places to the nearest whole number and to one decimal place (copied from Fractions)	I can solve problems which require answers to be rounded to specified degrees of accuracy (copied from Fractions)
Problem solving							
I can solve real world mathematical problems with numbers up to 5.	I explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	I can use place value and number facts to solve problems	I can use place value and number facts to solve problems	I can solve number problems and practical problems involving these ideas.	I can solve number and practical problems that involve all of the above and with increasingly large positive numbers	I can solve number problems and practical problems that involve all of the above	I can solve number and practical problems that involve all of the above
Addition and Subtraction							
Number Bonds							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	I can automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	I can represent and use number bonds and related subtraction facts within 20	I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
	I can automatically recall number bonds for numbers 0–10.						

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End points: Maths

Mental Calculation							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
		I can read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs I can represent and use number bonds and related subtraction facts within 20 I can add and subtract one-digit and two-digit numbers to 20, including zero I can solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 =? – 9.	I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers	I can add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	I can add and subtract numbers mentally with increasingly large numbers	I can perform mental calculations, including with mixed operations and large numbers	
		I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				I can use knowledge of the order of operations to carry out calculations involving the four operations	
Written Method							
I experiment with their own symbols and marks as well as numerals.		I can read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	I can add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	I can 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							
			I can recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	I can estimate the answer to a calculation and use inverse operations to check answers	I can estimate and use inverse operations to check answers to a calculation	I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	I can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

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End points: Maths

Problem Solving							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
		I can solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ∗ - 9	I can 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	I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
			I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)				I can Solve problems involving addition, subtraction, multiplication and division
Multiplication and Division							
Multiplication and Division Facts							
		I can count in multiples of twos, fives and tens (copied from Number and Place Value)	I can count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value)	I can count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)	I can count in multiples of 6, 7, 9, 25 and 1 000 (copied from Number and Place Value)	I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)	
			I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	I can recall multiplication and division facts for multiplication tables up to 12 × 12		
Mental Calculation							
				I can 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 (appears also in Written Methods)	I can 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	I can multiply and divide numbers mentally drawing upon known facts	I can perform mental calculations, including with mixed operations and large numbers

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			I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot		I can recognise and use factor pairs and commutativity in mental calculations (appears also in Properties of Numbers)	I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	*associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)* (copied from Fractions)
Written calculation							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	I can 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 (appears also in Mental Methods)	I can multiply two-digit and three-digit numbers by a one-digit number using formal written layout	I can 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	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
						I can 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	I can divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context 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
							I can use written division methods in cases where the answer has up to two decimal places

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Properties of numbers: multiples, factors, primes, square and cube numbers							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
					I can recognise and use factor pairs and commutativity in mental calculations (repeated)	I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	I can identify common factors, common multiples and prime numbers
						I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination
						I can establish whether a number up to 100 is prime and recall prime numbers up to 19 I can recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	*I can calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3* (from Measures)
Order of operations							
							I can use my knowledge of the order of operations to carry out calculations involving the four operations
Inverse operations, estimating and checking answers							
				I can estimate the answer to a calculation and use inverse operations to check answers (copied from Addition and Subtraction)	*I can estimate and use inverse operations to check answers to a calculation* (copied from Addition and Subtraction)		I use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
Problem solving							
		I can solve one-step problems involving multiplication and division, by calculating the answer using concrete objects,	I can solve problems involving multiplication and division, using materials, arrays, repeated addition, mental	I can solve problems, including missing number problems, involving multiplication and division, including positive integer	I can solve problems involving multiplying and adding, including using the distributive law to multiply two digit	I can solve problems involving multiplication and division including using their knowledge of	I can solve problems involving addition, subtraction, multiplication and division

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		pictorial representations and arrays with the support of the teacher	methods, and multiplication and division facts, including problems in contexts	scaling problems and correspondence problems in which n objects are connected to m objects	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	
						I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
						I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	*I can solve problems involving similar shapes where the scale factor is known or can be found (within Ratio and Proportion)*
Fractions (including decimals and fractions)							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Counting in fractional steps							
			I can count in fractions up to 10, starting from any number and using the1/2 and 2/4 equivalence on the number line (Non Statutory Guidance)	I can count up and down in tenths	I can count up and down in hundredths		
Recognising fractions							
		I can recognise, find and name a half as one of two equal parts of an object, shape or quantity	I can recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of a length, shape, set of objects or quantity	I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	I can recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence)	
				I can recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.			
		I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity		I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators			

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Comparing Fractions							
				I can compare and order unit fractions, and fractions with the same denominators		I can compare and order fractions whose denominators are all multiples of the same number	I can compare and order fractions, including fractions >1
Comparing decimals							
					I can compare numbers with the same number of decimal places up to two decimal places	I can read, write, order and compare numbers with up to three decimal places	I can identify the value of each digit in numbers given to three decimal places
Rounding including decimals							
					I can round decimals with one decimal place to the nearest whole number	I can round decimals with two decimal places to the nearest whole number and to one decimal place	I can solve problems which require answers to be rounded to specified degrees of accuracy
Equivalence (including fractions, decimals and percentages)							
			I can write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$.	I can recognise and show, using diagrams, equivalent fractions with small denominators	I can recognise and show, using diagrams, families of common equivalent fractions	I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination
					I can recognise and write decimal equivalents of any number of tenths or hundredths	I can read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$)	I can associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)
						I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	
					I can recognise and write decimal equivalents to $^1/_4$; $^1/_2$; $^3/_4$	I can 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 as a decimal fraction	I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

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Addition and subtraction of fractions							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
				I can add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$)	I can add and subtract fractions with the same denominator	I can add and subtract fractions with the same denominator and multiples of the same number	I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
						I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1\,{}^{1}/_{5}$)	
Multiplication and division of fractions							
						I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	I can multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^{1}/_{4} \times {}^{1}/_{2} = {}^{1}/_{8}$)
							I can multiply one-digit numbers with up to two decimal places by whole numbers
							I can divide proper fractions by whole numbers (e.g. $^{1}/_{3} \div 2 = {}^{1}/_{6}$)
Multiplication and division of decimals							
							I can multiply one-digit numbers with up to two decimal places by whole numbers
					I can 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		I can multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places

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							I can identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
							I associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$)
							I can use written division methods in cases where the answer has up to two decimal places
Problem Solving							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
				I can solve problems that involve all of the above	I can 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	I can solve problems involving numbers up to three decimal places	
					I can solve simple measure and money problems involving fractions and decimals to two decimal places.	I can solve problems which require knowing percentage and decimal equivalents of $^{1}/_{2}$, $^{1}/_{4}$, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those with a denominator of a multiple of 10 or 25.	

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Measurement							
Comparing and estimating							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
I can compare sizes, weights etc. using gesture and language - 'bigger/little/smaller', 'high/low', 'tall', 'heavy'.	I can compare length, weight and capacity.	I can compare and order lengths, mass, volume/capacity and record the results using >, < and =		I can estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)	I can calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes (also included in measuring)	I can calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3.	I can measures short periods of time in simple ways.
I can make comparisons between objects relating to size, length, weight and capacity.						I can estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water)	
		I can sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	I can compare and sequence intervals of time	I can compare durations of events, for example to calculate the time taken by particular events or tasks			
				I can estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time)			
Measuring and calculating							
		I can measure and begin to record the following: * **lengths and heights** * **mass/weight** * **capacity and volume** * **time** (hours, minutes, seconds**)**	I can 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	I can measure, compare, add and subtract: **lengths** (m/cm/mm); **mass** (kg/g); **volume/capacity** (l/ml)	I can estimate, compare and calculate **different measures,** including **money in pounds and pence** (appears also in Comparing)	I can use all four operations to solve problems involving measure (e.g. **length, mass, volume, money**) using decimal notation including scaling.	I can solve problems involving the calculation and conversion of **units of measure**, using decimal notation up to three decimal places where appropriate

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			unit, using rulers, scales, thermometers and measuring vessels				(appears also in Converting)
				I can measure the **perimeter** of simple 2-D shapes	I can measure and calculate the **perimeter** of a rectilinear figure (including squares) in centimetres and metres	I can measure and calculate the **perimeter** of composite rectilinear shapes in centimetres and metres	I can recognise that shapes with the same areas can have different **perimeters** and vice versa
		I can recognise and know the value of different denominations of **coins and notes**	I can recognise and use symbols for pounds **(£) and pence (p)**; combine amounts to make a particular value	I can add and subtract amounts of **money** to give change, using both £ and p in practical contexts			
			I can find different combinations of coins that equal the same amounts of money				
			I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change				
					I can find the area of rectilinear shapes by counting squares	I can calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes *recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})* (copied from Multiplication and Division)	I can calculate the area of parallelograms and triangles
							calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3)

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							and cubic metres (m^3), and extending to other units [e.g. mm^3 and km^3].
							I can recognise when it is possible to use formulae for area and volume of shapes
Telling the time							
		I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	I can 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.	I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	I can read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)		
		I can recognise and use language relating to dates, including days of the week, weeks, months and years	I can know the number of minutes in an hour and the number of hours in a day. (appears also in Converting)	I can estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Comparing and Estimating)			
					I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)	I can solve problems involving converting between units of time	
Converting							
			I know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)	I know the number of seconds in a minute and the number of days in each month, year and leap year	I can convert between different units of measure (e.g. kilometre to metre; hour to minute)	I can convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	I can 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

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					I can read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)	I can solve problems involving converting between units of time	I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Measuring and Calculating)
					I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Telling the Time)	I understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	I can convert between miles and kilometres
Geometry -Properties of shape							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Identifying shapes and their properties							
I can talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.		I can recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line		I can identify lines of symmetry in 2-D shapes presented in different orientations	I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations	I can recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing)
I can select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.	I can compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.		I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces				I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Drawing and constructing							
I can build with a range of resources.			I can identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]				I can recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties)

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End points: Maths

				I can draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	I can complete a simple symmetric figure with respect to a specific line of symmetry	I can draw given angles, and measure them in degrees (^{o})	I can draw 2-D shapes using given dimensions and angles
Comparing and classifying shapes							
I can put objects inside others and take them out again.	I can select, rotate and manipulate shapes in order to develop spatial reasoning skills.			I can compare and sort common 2-D and 3-D shapes and everyday objects		I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	I can use the properties of rectangles to deduce related facts and find missing lengths and angles
I can combine shapes to make new ones – an arch, a bigger triangle etc.						I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles	
Angles							
				I can recognise angles as a property of shape or a description of a turn		I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
				I can 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	I can identify acute and obtuse angles and compare and order angles up to two right angles by size	I can identify: * angles at a point and one whole turn (total 360^{o}) * angles at a point on a straight line and ½ a turn (total 180^{o}) * other multiples of 90^{o}	I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
				I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines			

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End points: Maths

Geometry- Position and Direction							
Position, direction and movement							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
I can climb and squeezing selves into different types of spaces.		I can describe position, direction and movement, including half, quarter and three-quarter turns.	I can 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)		I can describe positions on a 2-D grid as coordinates in the first quadrant	I can 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	I can describe positions on the full coordinate grid (all four quadrants)
I can describe a familiar route.					I can describe movements between positions as translations of a given unit to the left/right and up/down		I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
I can discuss routes and locations, using words like 'in front of' and 'behind'.							
I understand position through words alone – for example, "The bag is under the table," – with no pointing.							
Pattern							
I notice patterns and arrange things in patterns.	I can continue, copy and create repeating patterns.		I can order and arrange combinations of mathematical objects in patterns and objects				
I can talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.							
Extend and create ABAB patterns –							

End points: Maths

stick, leaf, stick, leaf.							
I notice and correct an error in a repeating pattern.							
I begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'							
Statistics							
Interpreting, constructing and presenting data							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables	I can interpret and present data using bar charts, pictograms and tables	I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	I can complete, read and interpret information in tables, including timetables	I can interpret and construct pie charts and line graphs and use these to solve problems
			I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity				
			I can ask and answer questions about totalling and comparing categorical data				
Problem Solving							
				solve one-step and two-step questions [e.g. '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
Algebra							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Equations							
	I can solve one-step problems that involve addition and subtraction, using concrete objects and pictorial	I can recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. (copied from Addition and Subtraction)	I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction)		I can use the properties of rectangles to deduce related facts and find missing lengths and angles (copied from Geometry: Properties of Shapes)	I can express missing number problems algebraically	

End points: Maths

	representations, and missing number problems such as 7 = □ - 9 (copied from Addition and Subtraction)						
		I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (copied from Addition and Subtraction)	I can solve problems, including missing number problems, involving multiplication and division, including integer scaling (copied from Multiplication and Division)			I can find pairs of numbers that satisfy number sentences involving two unknowns	
	I can represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction)					I can enumerate all possibilities of combinations of two variables	
Formulae							
					I know perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. (Copied from NSG measurement)		I can use simple formulae
							I can recognise when it is possible to use formulae for area and volume of shapes (copied from Measurement)
Sequencing							
		I can sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement)	I can compare and sequence intervals of time (copied from Measurement)				I can generate and describe linear number sequences

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End points: Maths

			I can order and arrange combinations of mathematical objects in patterns (copied from Geometry: position and direction)				

Ratio and Proportion							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Statements only appear in Year 6 but should be connected to previous learning, particularly fractions and multiplication and division							
							I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
							I can solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
							I can solve problems involving similar shapes where the scale factor is known or can be found
							I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.