Yew Tree Primary School
Maths Key Skills Progression
NUMBER AND PLACE VALUE

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
NUMBER AND PLACE VALUE	**COUNTING**	Recite numbers past 5.	Count objects, actions and sounds. Count beyond 10 Verbally count beyond 20, recognising the pattern of the counting system	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			Count backwards through zero to include negative numbers	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Use negative numbers in context, and calculate intervals across zero
		Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle)	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly	Count numbers to 100 in multiples of twos, fives and tens (appears also in multiplication and division)	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (repeated in multiplication and division)	Count from 0 in multiples of 6, 7 and 8 Count from 0 in multiples of 50 and 100 (repeated in multiplication and division)	Count from 0 in multiples of 2, 3, 4, 5, 6, 7, 8, 9,10, 11 and 12 Count in multiples of 25 and 1000 (repeated in multiplication and division)	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (repeated in multiplication and division)	
		Say one number name for each item in order: 1, 2, 3, 4, 5		Identify one more and one less from a given number		Know how to find 10 or 100 more or less than a given number	Know how to find 1000 more or less than a given number		
	COMPARING NUMBER	Compare quantities using the language 'more than/fewer than'	Use the language of: equal to, more than, less than (fewer), most, least	Use the language of: equal to, more than, less than (fewer), most, least	Compare and order numbers from 0 up to 100; use <, > and = signs	Compare and order numbers up to 1000	Order and compare numbers beyond 1000 Compare numbers with the same number of decimal places up to two decimal places (repeated in fractions)	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (repeated in reading and writing numbers)	Read, write, order and compare numbers up to 10 000000 and determine the value of each digit (repeated in Reading and Writing Numbers)
			Understand the 'one more than/one less than' relationship between consecutive numbers.	Reason about the location of numbers to 20 within the linear number system, including comparing using inequality symbols < > and =	Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.	Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10	Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100	Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system

	IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS	Develop fast recognition of up to 3 objects, without having to count them individually ('subitising') Show 'finger numbers' up to 5	Subitise up to 5 Link the number symbol (numeral) with its cardinal number value	Identify and represent numbers using objects and pictorial representations including the number line	Identify, represent and estimate numbers using different representations, including the number line	Identify, represent and estimate numbers using different representations	Identify, represent and estimate numbers using different representations		
NUMBER AND PLACE VALUE	**READING AND WRITING NUMBERS (INCLUDING ROMAN NUMERALS)**	Experiment with their own symbols and marks as well as numerals.	Experiment with their own symbols and marks as well as numerals. Read and write numbers from 1 -10 in numerals	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	Read and write numbers up to 1000 in numerals and in words	Read and write numbers up to 1000 in numerals and in words revision	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (repeated in understanding place value)	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (repeated in understanding place value)
		Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5	Link the number symbol (numeral) with its cardinal number value			Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (repeated in measurement)	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 (repeated in measurement)	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals (repeated in measurement)	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals - revision (repeated in measurement)
	UNDERSTANDING PLACE VALUE	Show 'finger numbers' up to 5 using the language of 'add 1 more'	Understand the 'one more than/one less than' relationship between consecutive numbers	Explore the place value of each digit in a two-digit number (tens, ones) up to 20	Know the place value of each digit in a two-digit number (tens, ones)	Know the place value of each digit in a three-digit number (hundreds, tens, ones)	Know the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	Know how to read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit repeated in reading and writing numbers)	Know how to read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (repeated in reading and writing numbers)
		Explore the composition of numbers to 5	Explore the composition of numbers to 10 Have a deep understanding of numbers to 10, including the composition of each number	Explore the composition of numbers to 20 Have a deep understanding of numbers to 20, including the composition of each number	Compose and decompose two-digit numbers using standard and non-standard partitioning	Compose and decompose three-digit numbers using standard and non-standard partitioning	Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.	Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning	Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning
	ROUN						Round any number	Round any number	Round any whole

							up to 1 000 000 to the nearest 10, 100 and 1000	up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	number to a required degree of accuracy
					Use place value and number facts to solve problems	Solve number problems and practical problems involving these ideas	Solve number problems and practical problems that involve all of the above and increasingly large positive numbers	Solve number problems and practical problems that involve all of the above	Solve number problems that involve all of the above

Yew Tree Primary School

Maths Key Skills Progression

ADDITION AND SUBTRACTION

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
ADDITION AND SUBTRACTION	**NUMBER BONDS**		Automatically recall number bonds for numbers 0-5 and some to 10	Use addition and subtraction facts to 10 fluently, and derive and use number bonds and related subtraction facts within 20	Use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
	MENTAL CALCULATION	Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle)	Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 and some number bonds to 10, including double facts	Add and subtract one-digit and two-digit numbers to 20, including zero	Add and subtract numbers mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers	Add and subtract numbers mentally, including: a three-digit number and one, a three-digit number and tens, a three-digit number and hundreds		Add and subtract numbers mentally with increasingly large numbers	Perform mental calculations, including with mixed operations and large numbers
			Automatically recall (without reference to rhymes, counting or other aids) subtraction facts up to 5		Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				I know how to use my knowledge of the order of operations to carry out calculations involving the four operations

	WRITTEN METHODS	Experiment with their own symbols and marks as well as numerals	Experiment with their own symbols and marks as well as numerals	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Add and subtract numbers with up to two digits, using formal written methods of column addition and subtraction	Add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction	I know how to add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate	I know how to add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction)	
	INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS		Have a deep understanding of the composition of numbers to 10	Explore the composition of numbers to 20 Have a deep understanding of numbers to 20, including the composition of each number	Use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	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, levels of accuracy	Estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
ADDITION AND SUBTRACTION	**PROBLEM SOLVING**		Explore and represent patterns within numbers up to 10, including evens and odds	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 addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
					solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (repeated in measurement)			Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Solve problems involving addition, subtraction, multiplication and division

Yew Tree Primary School
Maths Key Skills Progression
MULTIPLICATION AND DIVISION

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
MULTIPLICATION AND DIVISION	**MULTIPLICATION & DIVISION FACTS**		Know double facts to 10	Count numbers to 100 in multiples of twos, fives and tens repeated in number and place value)	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (repeated in number and place value)	Count from 0 in multiples of 3 4 and 8 Count from 0 in multiples of 50 and 100 (repeated in number and place value)	Count from 0 in multiples of 6, 7 and 9 Count in multiples of 25 and 1000 (repeated in number and place value)	Count from 0 in multiples of 6, 7 and 9 Count in multiples of 25 and 1000 – revision (repeated in number and place value)	
			Know how quantities can be distributed evenly		Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Recall multiplication and division facts for multiplication tables up to 12 × 12	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (repeated in number and place value)	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 revision (repeated also in number and place value)
MULTIPLICATION AND DIVISION	**MENTAL CALCULATION**				Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	Write and calculate mathematical statements for multiplication and division using the multiplication tables that I know, including for two-digit numbers times one-digit numbers, using mental methods (repeated in written calculation)	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	Multiply and divide numbers mentally drawing upon known facts	Perform mental calculations, including with mixed operations and large numbers
							Recognise and use factor pairs and commutativity in mental calculations (repeated in Properties of Numbers)	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. $^{3}/_{8}$) (repeated in Fractions)

MULTIPLICATION AND DIVISION	**WRITTEN CALCULATION**				Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	Write and calculate mathematical statements for multiplication and division using the multiplication tables that I know, including for two-digit numbers times one-digit numbers, using formal written methods (appears also in Mental 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 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 short division where appropriate for the context
								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	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
MULTIPLICATION AND DIVISION	**PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS**						Recognise and use factor pairs and commutativity in mental calculations (repeated 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	Identify common factors, common multiples and prime numbers Use common factors to simplify fractions; use common multiples to express fractions in the same denomination (repeated in fractions)

MULTIPLICATION AND DIVISION								Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	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 (repeated in measures)
	ORDER OF OPERATIONS								Use their knowledge of the order of operations to carry out calculations involving the four operations
	INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					Estimate the answer to a calculation and use inverse operations to check answers (Also, in Addition and Subtraction)	Estimate and use inverse operations to check answers to a calculation (Also, in Addition and Subtraction)		Use estimation to check answers to calculations and determine, in the context of a problem
	PROBLEM SOLVING			Solve one-step problems involving repeated addition and sharing, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	Use their knowledge of the order of operations to carry out calculations involving the four operations
								Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Solve problems involving similar shapes where the scale factor is known or can be found (repeated in ratio and proportion).

								Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	

Yew Tree Primary School

Maths Key Skills Progression

FRACTIONS AND DECIMALS

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
FRACTIONS AND DECIMALS	COUNTING IN FRACTIONAL STEPS				Pupils should count in fractions up to 10, starting from any number and using the1/2 and 2/4 equivalence on the number line	Count up and down in tenths	Count up and down in hundredths		
	RECOGNISING FRACTIONS	Explore shapes in the environment	Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.	Recognise, find and name a half as one of two equal parts of an object, shape or quantity	Recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of a length, shape, set of objects or quantity	Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.	Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence)	
		Learn and use new vocabulary half and whole	Learn and use new vocabulary half, whole, equal	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity		Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators			
						Recognise, find and write fractions as a discreet set of objects: unit fractions and non-unit fractions with small denominators			

FRACTIONS AND DECIMALS	**COMPARING FRACTIONS**					Compare and order unit fractions, and fractions with the same denominators		Compare and order fractions whose denominators are all multiples of the same number	Compare and order fractions, including fractions >1
	COMPARING DECIMALS						Compare numbers with the same number of decimal places up to two decimal places	Read, write, order and compare numbers with up to three decimal places	Identify the value of each digit in numbers given to three decimal places
	ROUNDING INCLUDING DECIMALS						Round decimals with one decimal place to the nearest whole number	Round decimals with two decimal places to the nearest whole number and to one decimal place	Solve problems which require answers to be rounded to specified degrees of accuracy
	EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)				Write simple fractions e.g. $^{1}/_{2}$ of 6 = 3	Recognise and show, using diagrams, equivalent fractions with small denominators	Recognise and show, using diagrams, families of common equivalent fractions	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
					Recognise the equivalence of $^{2}/_{4}$ and $^{1}/_{2}$.		Recognise and write decimal equivalents of any number of tenths or hundredths	Read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$) Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$)
FRACTIONS AND DECIMALS							Recognise and write decimal equivalents to $^{1}/_{4}$; $^{1}/_{2}$; $^{3}/_{4}$	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	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

	ADDITION AND SUBTRACTION OF FRACTIONS					I can add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$)	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	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
								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							Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^{1}/_{4} \times {}^{1}/_{2} = {}^{1}/_{8}$)
									Multiply one-digit numbers with up to two decimal places by whole numbers
									Divide proper fractions by whole numbers (e.g. $^{1}/_{3} \div 2 = {}^{1}/_{6}$)
FRACTIONS AND DECIMALS	**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		Multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
							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		Multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places

									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
									Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$)
									Use written division methods in cases where the answer has up to two decimal places
	PROBLEM SOLVING					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	Solve problems involving numbers up to three decimal places	
							Solve simple measure and money problems involving fractions and decimals to two decimal places.	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.	

Yew Tree Primary School

Maths Key Skills Progression

MAP, RATIO AND PROPORTION

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
MAP, RATIO AND PROPORTION		**Statements only appear in Year 6 but should be connected to previous learning, particularly fractions and multiplication and division**							Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
									Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
									Solve problems involving similar shapes where the scale factor is known or can be found
									Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Yew Tree Primary School

Maths Key Skills Progression

ALGEBRA

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
ALGEBRA	EQUATIONS			Know how to solve one-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 **missing number** problems.	Solve problems, including **missing number** problems, using number facts, place value, and more complex addition and subtraction.		Use the properties of rectangles to deduce related facts and find **missing lengths and angles**	Express missing number problems algebraically
				Represent and use number bonds and related subtraction facts within 20	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	Solve problems, including **missing number** problems, involving multiplication and division, including integer scaling			Know how to enumerate all possibilities of combinations of two variables

									Find pairs of numbers that satisfy number sentences involving two unknowns
	FORMULAE						I know that perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit (repeated in measures)		Recognise when it is possible to use formulae for area and volume of shapes Use simple formulae
	SEQUENCES			Know how to sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening	Know how to compare and sequence intervals of time Know how to order and arrange combinations of mathematical objects in patterns				Know how to generate and describe linear number sequences

Yew Tree Primary School

Maths Key Skills Progression

MESUREMENT

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
MESUREMENT	**COMPARING AND ESTIMATING**	Make comparisons between objects relating to size, length, weight and capacity	Compare length, weight and capacity	Compare, describe and solve practical problems for: lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] mass/weight [e.g. heavy/light, heavier than, lighter than] capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] time [e.g. quicker, slower, earlier, later]	Compare and order lengths, mass, volume/capacity and record the results using >, < and =	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 (repeated in telling the time)	Estimate, compare and calculate different measures, including money in pounds and pence (repeated in measuring)	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 (repeated in measuring)	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

		Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	Describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] (appears also in time)	Compare and sequence intervals of time	Compare durations of events, for example to calculate the time taken by particular events or tasks		Estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water)	
	MEASURING and CALCULATING	Recognise that some objects are used in measuring e.g scales, tape measure, height chart	Explore measuring length, weight and capacity.	Measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds)	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	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Estimate, compare and calculate different measures, including money in pounds and pence (repeated in Comparing)	Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (repeated in Converting)
						Measure the perimeter of simple 2-D shapes	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Recognise that shapes with the same areas can have different perimeters and vice versa
MESUREMENT			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 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 (repeated in addition and subtraction)	Add and subtract amounts of money to give change, using both £ and p in practical contexts	Know that perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit (repeated in algebra)		

MESUREMENT							Find the area of rectilinear shapes by counting squares	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}) (repeated in multiplication and division)	Calculate the area of parallelograms and triangles 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 [e.g. mm^3 and km^3]. Recognise when it is possible to use formulae for area and volume of shapes
	TELLING THE TIME	Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	Describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	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.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (repeated in reading and writing numbers)	Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in reading and writing numbers)	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. (repeated in reading and writing numbers)	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals revision. (repeated in reading and writing numbers)
		Begin to recognise what season it is and what day of the week it is with support	Recognise and use language relating to dates; including the seasons, days of the week and months of particular significance to me e.g the month of my birthday	Recognise and use language relating to dates, including days of the week, weeks, months and years	Know the number of minutes in an hour and the number of hours in a day. (repeated in Converting)	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 (repeated in comparing and estimating)			
				Sequence events in		Know the number of	I can solve problems	I can solve problems	

				chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] (repeated in comparing)		seconds in a minute and the number of days in each month, year and leap year. (repeated in converting)	involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)	involving converting between units of time	
MESUREMENT	**CONVERTING**				I know the number of minutes in an hour and the number of hours in a day. (repeated in telling the time)	I can compare durations of events, for example to calculate the time taken by particular events or tasks (repeated in comparing and estimating)	Read, write and convert time between analogue and digital 12 and 24-hour clocks (repeated in time)	Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	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
					Compare and sequence intervals of time	Solve problems involving converting from hours to minutes; minutes to seconds; weeks to days years to months (repeated in telling the time)	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (repeated in telling the time)		Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (repeated in measuring and calculating)
						Know the number of seconds in a minute and the number of days in each month, year and leap year			Convert between miles and kilometres

Yew Tree Primary School

Maths Key Skills Progression

GEOMETRY

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
GEOMETRY	IDENTIFYING SHAPES AND THIER PROPERTIES	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'.		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].	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line		Identify lines of symmetry in 2-D shapes presented in different orientations	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Recognise, describe and build simple 3-D shapes, including making nets (repeated in drawing and constructing)
					Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces				Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
					Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]				
	DRAWING AND CONSTRUCTING	Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. Combine shapes to make new ones–an arch, a bigger triangle, etc.				Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Complete a simple symmetric figure with respect to a specific line of symmetry	Draw given angles, and measure them in degrees ($^{\circ}$)	Draw 2-D shapes using given dimensions and angles
									Recognise, describe and build simple 3-D shapes, including making nets (repeated in identifying shapes properties)
	COMPARING AND CLASSIFYING		Select, rotate and manipulate shapes in order to develop spatial reasoning skills.		Compare and sort common 2-D and 3-D shapes and everyday objects		Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Use the properties of rectangles to deduce related facts and find missing lengths and angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles,

			Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can					Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	quadrilaterals, and regular polygons
	ANGLES					Recognise angles as a property of shape or a description of a turn		Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
						Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	Identify acute and obtuse angles and compare and order angles up to two right angles by size	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°	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
						Identify horizontal and vertical lines and pairs of perpendicular and parallel lines			

Yew Tree Primary School
Maths Key Skills Progression
POSITION AND DIRECTION

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
POSITION AND DIRECTION	POSITION, DIRECTION AND MOVEMENT	Understand position through words alone–for example, "The bag is under the table," – with no pointing. Describe a familiar route. I can discuss routes and locations, using words like 'in front of' and 'behind'	Draw information from a simple map. Use positional language to describe where I am and/or to follow simple instructions e.g. 'put teddy in between the bowls'	Describe position, direction and movement, including half, quarter and three-quarter turns	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)		Describe positions on a 2-D grid as coordinates in the first quadrant I can describe movements between positions as translations of a given unit to the left/right and up/down	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	Describe positions on the full coordinate grid (all four quadrants)
							Plot specified points and draw sides to complete a given polygon		Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
	PATTERN	Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc Extend and create ABAB patterns–stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.	Continue, copy and create repeating patterns such as AABB, ABC, AABBCC, using objects, shapes and numerals	Recognise and create repeating patterns with objects and with shapes	Order and arrange combinations of mathematical objects in patterns and sequences				

Yew Tree Primary School

Maths Key Skills Progression

STATISTICS

TOPIC	ASPECT	NURSERY	RECEPTION	YEAR1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
STATISTICS	**INTERPRETING, CONSTRUCTING AND PRESENTING DATA**				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, construct pie charts and line graphs and use these to solve problems
					Can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity				
					Can ask and answer questions about totalling and comparing categorical data				
	SOLVING PROBLEMS					Can 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.	Can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Can solve comparison, sum and difference problems using information presented in a line graph	Can calculate and interpret the mean as an average