The Good Shepherd Catholic Primary School

Following Jesus,
The Good Shepherd,
in all we say and do

Maths Progression Map
2024 - 2025

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Maths: Progression Map

Intent: Our maths curriculum is creative and engaging and embraces the teaching for mastery approach to allow all children to succeed in the future, and potentially progress into the STEM industries, critical to science, technology and engineering. All teachers provide a deep, secure foundation of mathematics, and develop, and appreciation, sense of curiosity and enjoyment of the subject. Our highly ambitious and fully accessible football curriculum allows pupils who leave Good Shepherd School, confidence, secure, foundations, resilience in fluency, reasoning and problem-solving. High expectations of all insures that children use mathematical vocabulary to reason and explain the workings and are supported by concrete resources, before establishing ways of pictorially and formally representing their understanding. Children are encouraged to make rich connections across the areas of maths and use their secure knowledge in other subjects to embed their conceptual and procedural fluency. Maths is the foundation for understanding the world, and we want our children at Good Shepherd School to flourish when solving problems, essential to everyday life.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Number- Number and Place Value						
Counting	Count reliably with numbers from one to 20	Count to and across 100, beginning with zero or one or from any given number. Count in multiples of twos fives and tens	Count in steps of 2,3 and 5 from zero and in tens from any number forward or backward.	Count from zero in multiples of four, eight, 50 and 100 count up and down in tenths	Count in multiples of 6, 7, 9, 25 and 1000. Count forwards through 0 to include negative numbers. Count up and down in hundredths	Count, forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Count forwards and backwards in decimal steps.	Count, forwards or backwards in steps of integers decimals or powers of 10 for any number.
Place Value	Place numbers from one to 20 in order.	Read and write numbers to 100 in numerals. Read and write numbers from one to 20 in numerals and words. Begin to recognise the place value of	Read and write numbers to at least 100 in numerals and in words. Recognise that the place value of each digit in a two-	Read and write numbers up to 1000 in numerals, and in words. Read and write numbers with one decimal place. Recognise the value of each	Read and write numbers to at least 10,000. Read and write numbers with up to 2 decimal places. Recognise the place value of each digit in a four-	Read and write numbers to at least 1 million. Read and write numbers with up to 3 decimal places. Determine the value of each digit in	Read and write numbers up to 10,000,000. Determine the value of each digit in numbers up to 10,000,000. Identify the value of each

		numbers beyond 20 (tens and ones) Identify and represent numbers, using objects and pictorial representations, including the number line.	digit number (tens and ones) Partition numbers in different ways for example (23= 20+3 and 23= 10+13. Identify, represent and estimate numbers using different representations, including the number line.	digit in a three-digit number (hundreds, tens, ones) Identify the value of each digit to one decimal place. Partition numbers in different ways for example, 146=100 +40+6 and 146 = 130+16. Identify, represent and estimate numbers using different representations including the number line.	digit number (thousands, hundreds, tens and ones.) Identify the value of each digit to 2 decimal places. Partition numbers in different ways for example, 2.3+ 2+0.3 and 2.3= 1+1.3. Identify, represent and estimate numbers using different representations, including the number line.	numbers to at least 1 million. Identify the value of each digit to 3 decimal places. Identify, represent and estimate numbers using the number line.	digit to 3 decimal places. Identify, represent and estimate numbers using the number line.
Comparing and ordering	Say which number is one more or one less than a given number	Use the language of: Equal to, more than, less than, most and least. Given a number, identify one more and less.	Compare and order numbers from zero up to 100; use <, > and = signs. Find 1 or 10 more or less than a given number	Compare and order numbers up to 1000. Compare and order numbers with one decimal place. Find 1,10 or 100 more than a given number.	Compare and order numbers beyond 1000. Order and compare numbers with the same number of decimal places with up to 2 decimal places. Find zero. One, one, 10, 100 or 1000 more or less than a given	Order and compare numbers to at least 1 million. Order and compare numbers with up to 3 decimal places. Find 0.01, 0.1, one, 10, 100, 1000 and other powers of 10 more or less than a given number.	Order and compare numbers up to 10,000,000. Order and compare numbers, including integers, decimals and negative numbers. Find 0.001, 0.01, 0.1, one, 10 and powers of 10 more or less than a given number.

Rounding, approximation and estimation			Round numbers to at least 100 to the nearest 10.	Round numbers to at least 1000 to the nearest 10 or 100.	Round any number to the nearest 10 100 or 1000. Round decimals with one decimal place to the nearest whole number.	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. Round decimals with two decimal places to the nearest whole number and to one decimal place.	Round any whole number to a required degree of accuracy. Round decimals with three decimal places to the nearest whole number or 1 or two decimal places.
Multiply by powers of 10			Understand the connection between the 10 multiplication table and place value	Find the effect of multiplying a one- or two-digit number by 10 and 100. Identify the value of the digits in the answer.	Find the effect of dividing a one-or two-digit number by 10 and 100. Identify the value of the digits in the answers as ones, temps, and hundredths.	Multiply and divide whole numbers, and those involving decimals by 10, 101,000.	Multiply and, divide numbers by 10, 101,000 giving answers up to 3 decimal places.
Negative numbers					Count backwards through 0 to include negative numbers.	Interpret negative numbers in context, count, forwards and backwards with positive and negative whole numbers through zero.	Use negative numbers in context, and calculate intervals across zero.
Sequences and patterns		Recognise and create repeating patterns with numbers, objects and shapes. Identify odd and even numbers linked to counting in twos from zero and one.	Describe and extend, simple sequences involving counting on or back in different steps.	Describe and extend number, sequences involving counting on or back in different steps.	Describe and extend number, sequences involving counting on or back in different steps, including sequences with multiplication and division steps.	Describe and extend number sequences, including those with multiplication and division steps and those where the step size is a decimal.	Describe and extend number sequences, including those with multiplication and division steps, inconsistent steps, alternating steps, and those where

							the step size is a decimal.
Roman numerals				Read Roman numerals from I to XII.	Read Roman numerals to 100 (I to C) and to know that overtime, the numeral system changed to include the concept of zero and place value.	Read Roman numerals to 1000 (M) and recognise years in Roman numerals.	
Solving number problems		Solve problems and practical problems involving all of the above.	Use place value and number facts to solve problems.	Solve number problems and practical problems involving these ideas.	Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	Solve number problems and practical problems that involve all of the above.	Solve number problems and practical problems that involve all of the above.
	Number- Addition and Subtraction						
Understanding addition and subtraction	Use quantities and objects, add and subtract two single digit numbers.	Read, write and interpret mathematical statements, involving addition, subtraction and equals as well as using the symbols.	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall, known fact, calculate mentally, use jotting) Show that addition of two numbers can be done in any order, commutative and subtraction of	Choose an appropriate strategy to solve a calculation based upon the numbers involved, (recall, and known fact, calculate mentally, use the jotting, or written method) Understand and use takeaway and difference for subtraction, deciding on the most efficient method for the numbers involved,	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recalling known fact, calculate mentally, use a jotting, written method)	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recalling known fact, calculate mentally, use a jotting, written method)	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recalling known fact, calculate mentally, use a jotting, written method)

			one number from another cannot. Understand subtraction as takeaway and different example, how many more, how many less/fewer.	irrespective of context.			
Addition and subtraction facts	Count on or back to find the answer.	Represent and use number bonds and related subtraction facts within	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Recall and use number bonds for multiples of five totalling 60 (To support telling time to nearest five minutes).	Recall and use addition and subtraction facts for 100 (multiples of five and 10). Derive and use addition and subtraction facts for 100. Derive and use addition and subtraction facts for multiples of 100 totalling 1000.	Recall and use addition and subtraction facts for 100. Recall and use addition and subtraction facts for multiples of 100 totalling 1000. Derive and use addition and subtraction facts for one and 10 (with decimal numbers to one decimal place).	Recalling use, addition and subtraction facts for one and 10 (with decimal numbers to one decimal place) Derive and use addition and subtraction facts for one (with the decimal numbers to 2 decimal places).	Recalling use, addition and subtraction facts for one (with decimal numbers to 2 decimal places).
Mental methods		Add and subtract one-digit, and two-digit numbers to 20, including zero (using concrete objects and pictorial representations).	Select a mental strategy appropriate for the numbers involved in the calculation. Add and subtract numbers, using concrete objects, pictorial, representations, and mentally,	Select a mental strategy appropriate for the numbers involved in the calculation. Add and subtract numbers mentally from a three-digit number, ones, tens and hundreds.	Select a mental strategy appropriate for the numbers involved in the calculation Add and subtract mentally different combinations of two and three-digit numbers and	Select a mental strategy appropriate for the numbers involved in the calculation Add and subtract numbers mentally with increasingly large numbers and decimals to 2 decimal places.	Select a mental strategy appropriate for the numbers involved in the calculation Perform mental calculations, including with mixed operations, and large numbers, and decimals.

			including: add two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three-digit numbers		decimals to one decimal place.		
Written methods		*Written methods are informal at this stage-see mental methods for expectations of calculations.	*Written methods are informal at this stage-see mental methods for expectations of calculations.	Add and subtract numbers with up to 3 digits, using formal, written methods of Columnar, now addition and subtraction	Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written method of Columnar now addition and subtraction where appropriate.	Add and subtract whole numbers with more than four digits and decimals with two decimal places, including use of formal, written methods (columnar addition and subtraction)	Add and subtract whole numbers and decimals using formal written method (Columnar, addition and subtraction)
Estimating and checking calculations	Estimates how many objects they can see and checks by counting.		Recognise and 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.	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Order of operations							Use their knowledge of the order of operations to carry out calculations involving the four operations.
Solving addition and subtraction		Solve one step problems that	Solve problems with addition and	Solve problems, including missing	Solve addition and subtraction two-step	Solve addition and subtraction,	Solve addition and subtraction,

problems including those with missing numbers		involve addition and subtraction, using concrete objects, and pictorial representations, and missing number problems, such as 7=. - 9	subtraction, including those with missing numbers: -Using concrete objects and pictorial representations, including those involving numbers, quantities and measures. -applying increasing knowledge of mental and written methods	number problems, using number, fax, place, value, and more complex addition and subtraction.	problems in context, deciding which operations and methods to use and why. Solve addition and subtraction problems involving missing numbers.	multistep problems in context, deciding which operations and methods to use and why. Solve addition and subtraction problems involving missing numbers.	multistep problems in context, deciding which operations and methods to use, and why. Solve problems, involving addition, subtraction, multiplication, and division, including those with the missing numbers.
	Number- Multiplication and division						
Understanding multiplication and division	Solve problems including doubling having and sharing.		Understand multiplication as repeated addition. Understand division is sharing and grouping and that a division calculation can have a remainder. Show that multiplication of two numbers can be done in any order, (commutative)	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact or related fact, calculate mentally, use the jotting, written method). Understand that division is the inverse of multiplication and vice versa. Understand how	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall, unknown, or related fact, calculate mentally, use the jotting, written method) Recognise factors and their pairs, as well as commutativity in mental calculations.	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall, unknown, or related fact, calculate mentally, use the jotting, written method) Identify multiples and factors, including finding all factor, pairs of a number, and	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall, unknown, or related fact, calculate mentally, use the jotting, written method)

			and division of one number by another cannot.	multiplication division statements can be represented using erase. Understand division of sharing and grouping and use each appropriately.		common factors of two numbers.	
Multiplication and division facts	Soft, practical problems that involve combining groups of two, five or 10 or sharing into equal groups.		Recalling use multiplication and division facts for the two, five and 10 multiplication tables, including recognising odd and even numbers.	Recall and use multiplication and division facts for the four and eight multiplication tables. Start to learn and embed the 3, 6,and 9 times tables.	Recall multiplication and division facts for multiplication times tables up to 12×12.	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 record prime numbers, up to 19. Recognise and use square numbers and cube numbers, and the notation four squared (2) and cubed (3).	Identify common factors, common, multiples and prime numbers.
Mental methods			Calculate mathematical statements for multiplication (using repeated addition) and division within the multiplication tables.	Write and calculate mathematical statements for multiplication and division using what they know, including for two-digit numbers times one-digit	Use place, value, known and derived facts to multiply and divide mentally, including- multiplied by zero, dividing by one, multiplying together three numbers.	Multiply and divide numbers, mentally drawing upon known facts. Solve problems involving number multiplication and division, including using their	Perform mental calculations, including with mixed operations and large numbers.

				numbers, using mental methods.		knowledge of factors and multiples, squares and cubes.	
Written methods		*Written methods are informal at this stage-see mental methods for expectations.	*Written methods are informal at this stage-see mental methods for expectations. Write the symbols for multiplication, division and equals	Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one digit numbers, progressing to formal written methods. Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, progressing to formal written methods.	Multiply two-digit, and three-digit numbers by one-digit number, using formal written layout. Divide numbers, up to 3 digits by one-digit number, using the formal written method of short division, and interpret reminders appropriately for the context.	Multiplying numbers, up to 4 digits by one or two-digit number, using a formal written method, including long multiplication or two-digit numbers. Divide numbers, up to 4 digits by one-digit number, using the formal written method of short division, and interpret reminders appropriately for the context.	Multiply multidigit numbers, up to 4 digits by two-digit whole number, using the formal written method of long multiplication. Multiply one-digit numbers with up to 2 decimal places by whole numbers. Divide numbers, up to 4 digits by two-digit number, using the formal written method of short division, where appropriate, interpreting remainders, according to the context. Use written division methods in cases where the answer has up to 2 decimal places.
Estimating and checking calculations	Estimates how many objects they can see and			Use estimation to check answers to calculations and determine, in the	Use estimation to check answers to calculations and determine, in the	Use estimation to check answers to calculations and determine, in the	Use estimation to check answers to calculations and determine, in the

	checks by counting them.			context of a problem, an appropriate degree of accuracy.	context of a problem, an appropriate degree of accuracy.	context of a problem, an appropriate degree of accuracy.	context of a problem, an appropriate degree of accuracy.
Order of operations							Use their knowledge of the order of operations to carry out calculations involving the four operations.
Solving multiplication and division problems including those with missing numbers		Solve one-step problems, involving multiplication and division, by calculating the answer, using concrete objects, pictorial representations, and a raise with the support of the teacher.	Solve problems involving multiplication and division (including those with remainders) using materials, arrays, repeat addition, mental methods, and multiplication and division facts, including problems in contacts.	Solve problems, including missing number problems, involving multiplication and division (and interpreting reminders), 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, division (including interpreting reminders), integers, scaling, problems, and harder. Correspondence problems, such as n objects are connected to m objects.	Solve problems, involving addition, subtraction, multiplication and division, and the combination of these, including understanding the meaning of the =. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Solve problems, involving addition, subtraction, multiplication and division.
	Number- Fractions (including decimals and percentages)						
		Understand that fraction can describe part of a whole. Understand that a unit fraction represents 1 equal part of a whole.	Understand and use the terms numerator and denominator. Understand that fraction can describe part of a	Show practically or pictorially that a fraction is one whole number divided by another. For example, ¾ can	Understand the fraction is one whole number divided by another, for example, 3/4 can be interpreted as 3 divided by 4.		

			set. Understand that the larger the denominator is, the more pieces it is split into, and therefore the smaller each part will be.	be interpreted as 3 divided by 4. Understand the finding. A fraction of an amount relates to division.			
Fractions of objects, shapes and quantities		Recognise, find a name 1/2 as one of two equal parts of an object, shape or quantity, including measure. Recognise, find a name 1/4 as one of four equal parts of an object, shape or quantity.	Recognise, find a name and write fractions of a length, shape, set of objects or quantity.	Recognise find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise 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, including those with the range of numerators and denominators. Recognise that hundredths arise when dividing an object by hundred and dividing tenths by ten.	Recognise mixed numbers and improper fractions and convert from one to the other. Read and write decimal numbers as fractions.	
Counting, comparing and ordering fractions			Count on and back in steps of halves and quarters.	Count on and back in steps of fifths, sixths and sevenths. Compare	Count on and back in steps of unit fractions. Compare and order unit	Count on and back in mixed number steps. Compare and order fractions	Compare and order fractions, including fractions more than one.

				and order unit fractions and fractions with the same denominators.	fractions and fractions with the same denominators.	whose denominators are all multiples of the same number.	
			Write simple fractions, for example, half of equals 3 and recognise the equivalence of halves and quarters.	Recognise and show fractions using diagrams. Equivalent fractions with small denominators.	Recognise and show, using diagrams, families of common equivalent fractions. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents.	Identify, name and write equivalent fractions of a given fraction represented visually, including tenths and hundredths. Recognise and use thousands and relate them to tenths, hundredths and decimal equivalents.	Use common factors to simplify fractions; Use common multiples to express fractions in the same denomination. Recall and use equivalences between simple fractions, decimals, and percentages, including in different contexts. Associate a fraction with division and calculate decimal fraction equivalence.
				Add and subtract fractions with the same denominator within one whole. Example. ¼ add 2/4= ¾.	Add and subtract fractions with the same denominator using diagrams.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Write mathematical statements. Multiply proper fractions and mixed numbers by whole numbers, supported	Add and subtract fractions with different denominators and mixed numbers, using the concepts of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its

						by materials and diagram.	simplest form. Divide proper fractions by whole numbers.
Percentages						Recognise the percent symbol (%) and understand that percent relates to number of parts per hundred and write percentages as fraction with a denominator as 100.	Find simple percentages of amounts.
Solving problems involving fractions, decimals and percentages					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. So simple measure and many problems involving fractions and decimals to two decimal places.,	Solve problems involving fractions. Solve problems involving number up to three decimal places. Solve problems which require knowing percent and decimal equivalence	South problems involving fractions. Solve problems which require answers to be rounded to specified degrees of accuracy. Solve problems involving the calculation of percentages, for example of measures and such as 15% of 360 and use the percentages for comparison.
Ratio and proportion							
Ratio and proportion							Solve problems involving the relevant size of two quantities where

							missing values can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. Solve problems involving similar shapes where the scale factor is known or can be found.
Algebra							
Algebra							Express missing number problems algebraically using simple formulae. Generate and describe linear number sequences. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.
Measurements (Length/height, perimeter, area and mass/weight)							
Length/ height	Children use everyday language to talk about size, length/ height. Example biggest/	Measure and begin to record lamps and heights. Using non-standard and then manageable standard units,	Choose and use appropriate standard units to estimate and measure length/ height in any	Measure, add and subtract lengths (m/cm/mm) Compare lengths (m/cm/mm)	Estimate and calculate lengths. Compare lengths	Use, read and write standard units of length to a suitable degree of accuracy.	Use, read and write standard units of length using decimal notation to three decimal places.

	bigger/ big. Smallest/ smaller/ small. Shortest/ shorter/ short. Tall/ taller/ tallest/ longest/ longer/ long.	(metres and centimetres) within children's range of counting competence. Compare and describe lengths and heights. For example Long/ short, longer/ shorter, tall/ short, double/ half.	direction (m/cm) to the nearest appropriate unit using rulers. Compare and order lengths and record the result using less than, greater than and equal to symbol (<, > and =).			Understand and use appropriate equivalences between metric and common imperial units such as inches.	
Perimeter				Understand that perimeter is a measure of distance around the boundary of a shape. Measure the perimeter of simple 2D shapes.	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Measure and calculate the perimeter of a composite rectilinear figure (including squares) in centimetres and metres.	Recognise that shapes with the same areas can have different perimeters and vice versa.
Area					Understand that area is a measure of surface within a given boundary. Find the area of rectilinear shapes by counting squares.	Calculate and compare the area of rectangles, including squares. Use standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.	Calculate the area of parallelograms and triangles. Recognise when it is possible to use the formulae for area and volume of shapes.
Mass	Use everyday language to talk about weight. Example	Measure and begin to record mass/ weight using non-standard and then	Choose and use appropriate standard units to estimate and	Measure, add and subtract mass (kg/g).	Calculate and estimate mass.	Use, read and write standard units of mass to a suitable degree of accuracy.	Use, read and write standard units of mass using decimal

	heaviest/ heavier/ lightest/ lighter/ light.	standard units (g and kg) within children's range of counting competence. Compare and describe mass/ weight. For example, heavy/ light, heavier than, lighter than.	measure mass (kg/g) to the nearest appropriate unit using scales. Compare and order mass and record the results using <, > and =	Compare Mass.	Compare Mass.	Understand and use approximate equivalences between metric and common imperial units such as pounds.	notation to three decimal places.
Measurement (capacity, volume, temperature and conversion)							
Capacity/volume	Use everyday language to talk about capacity, EG full/ half/ empty	Measure and begin to record capacity and volume using non-standard and then standard units (litres and ml) within children's range of counting competence. Compare and describe capacity and volume. For example, Full, empty, more than, less than, half, quarter.	Choose and use appropriate standard units to estimate measure capacity and volume (litres and ml) to the nearest appropriate unit using measuring vessels. Compare and order volume/ capacity and record the results using <, > and = symbols	Measure add and subtract volume/ capacity (litres and ml). Compare volume/ capacity.	Estimate and calculate volume/ capacity. Compare volume/ capacity.	Estimate and calculate volume, for example using 1 cm3 blocks to build cuboids including cubes and capacity, for example using water. Understand the difference between liquid volume, including capacity and solid volume. Understand and use approximate equivalences between metric and common imperial units such as pints.	Use, read and write standard units of volume using decimal notation to 3 decimal places. Calculate and estimate volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3) extending to other units for example (mm3 and km3) Compare volume of cubes and cuboids using standard units including cubic centimetres and

							cubic metres and extending to other units.
Temperature.			Choose and use appropriate standard units to estimate measure temperature to the nearest degree (°C) using thermometers.	Continue to estimate and measure temperature to the nearest degree (°C) sing thermometers.	Order temperatures including those below 0°C	Continue to order temperatures, including those below 0°C	Calculate differences in temperature, including those that involve a positive and negative temperature.
Conversion					Convert between different units of measure. Example kilometre to metre, hours to minutes.	Convert between different units of metric. Measure, for example kilometre and metre, centimetre, a metre, centimetre and millimetre, gramme and kilogramme, litre and millilitre.	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 three decimal places. Convert between miles and kilometres.
Measurement (time)							
Time	Use everyday language to talk about time and sequence events. E.g Morning/ afternoon/ evening. First/	Recognise the news language relay into dates, including days of the week, months and years. Compare and described time for example, quicker, slower,	Compare and sequence intervals of time. Know the number of minutes in an hour and the	Recording compare time in terms of seconds, minutes and hours. Use vocabulary such as o'clock, AM, PM, morning,	Convert between different units of time, Example hours to minutes. Read, write and convert time between analogue	Convert between units of time in a problem-solving context. Continue to read, write and convert time between	Use, read and write standard units of time.

	next/ then/ finally.	earlier, later. Sequence events in chronological order using language. For example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Measure and begin to record time (hours, minutes, seconds) Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	number of hours in a day. Tell and write the time to 5 minutes, including quarter past /to the hour and draw the hands on a clock face to show these times.	afternoon, noon and midnight. Know the number of seconds in a minute, and the number of days in each month, year, and leap year. Tell and write the time from an analogue clock, including using Roman numerals and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest mini. Compare durations of events, for example, to calculate the time taken by events or tasks.	and digital 12- and 24-hour clocks.	analogue and digital 12- and 24-hour clocks.	
Measurement (money and solving problems)							
Money	Use everyday language to talk about money and compare quantities. E.g. 1p, 2p, 5p, 10p and 20p	recognise and know the value of different denominations of coins on notes.	Recognise and use symbols for pounds (£) and pence (p). Combine amounts to make a particular value.	Continue to recognise and use symbol for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence.	Write amounts of money using decimal notation. Recognise that one hundred 1p coins are equivalent to £1		

			Find different combinations of coins that equal the same amounts of money. Add and subtract money of the same unit, including giving change.	Recognise that ten 10p coins are equivalent to £1, and that each 10p coin is of £1. Add and subtract amounts of money to give change, using both £ and p in practical contexts.	and that each coin is of £1 Estimate, compare and calculate money in pounds and pence.		
Solving problems involving money and measures	Solve problems by comparing size, weight, length, high, capacity, and money.	So practical problems for: - Lengths and heights - Mass/ weight - Capacity and volume - Time	Solve simple problems in a practical context involving additional subtraction of money and measures including time.	Solve problems involving money and measures and simple problems involving passage of time.	South problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days, and problems involving money and measures.	Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling. Solve problems involving converting between units of time.	Solve problems involving the calculation conversion of units of measure (including money and time), using decimal notation up to three decimal places where appropriate.
Geometry							
Properties of shape	Recognise and explore characteristics of everyday objects and shapes. Use mathematical language to describe them. E.g. sides/corners	Recognise the name Common 2D shapes, including rectangles, squares, circles and triangles. Recognise and name common 3D shapes including cuboids,	Identify and describe the properties of a 2D shape including the number of sides, and line, symmetry in a vertical line.	Draw 2D shapes and describe them. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2D	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Use the properties of rectangles to	Compare and classify geometric shapes based on their properties and sizes. Draw 2D shapes using given

		cubes, pyramids and spheres.	Identify 2D shapes on the surface of 3D shapes. For example, a circle on a cylinder and a triangle on a pyramid. Identifying Describe the properties of 3D shapes, including the number of edges, vertices, and faces.	Make 3D shapes using modelling materials. Recognise 3D shapes in different orientations and describe them.	shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry. Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Compare and classify geometric shapes based on their properties and sizes.	juice related facts and find missing lengths of angles. Identify 3D shapes, including cubes and other cuboids, from 2D representations.	dimensions and angles. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise, describe and build simple 3D shapes, including making nets.
Angles and rotation		Describe movement, including whole, half, quarter and three-quarter turns.	Use mathematical vocabulary to describe movement, including rotation as a turn. Understand the link between rotation and turns in terms of right angles for quarter, half and three-quarter turns (clockwise	Recognise angles as a property of a shape or a description of a turn. Identify right angles, recognise that two right angles make a half turn and two further turns will complete a full turn. Identify whether angles are greater	Identify acute and obtuse angles and compare and order angles up to two right angles by size.	No angles are measured in degrees: estimate and compare acute, obtuse, and reflex angles. Draw given angles, and measure them in degrees (°) Identify: -angles at a point and one whole turn totals 360° - Angles at a point on a straight line 180°	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Find unknown angles in any triangles, quadrilaterals, and regular polygons.

			and anticlockwise).	than or less than a right angle.		- Other multiples of 90°	
Geometry (position and direction)							
Patterns	Recognise, create and describe patterns E.g. Colour/ shape/ pattern.	Recognise and create repeating patterns with objects and shapes.	Order and arrange combinations of mathematical objects in patterns and sequences.				
Position and direction	Describe their relative position, such as 'behind' or 'next to'.	Describe position and direction.	Use mathematical vocabulary to describe position, movement, including movement in a straight line.				
Coordinates (including reflection and translation				Describe positions on a square grid labelled with letters and numbers.	Describe positions on a 2D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given Polygon. Describe movements between positions as translations of a given unit to the left/ right and up/ down.	Describe positions on the first quadrant of a coordinate grid. Plot specified points and complete shapes. Identify, describe and represent the position of a shape following a reflection or a translation, using the appropriate language and know	Missions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane and reflect them in the axis.

						that the shape has not changed.	
Statistics							
Sorting and classifying		Sort objects, numbers and shapes to a given criterion and their own.	Compare and so objects, numbers, and common 2D and 3D shapes and everyday objects.	Use sorting diagrams to compare and so objects, numbers and common 2D and 3D shapes and everyday objects.	Use a variety of sorting diagrams to compare and classify numbers and geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	Complete an interpret information in a variety of sorting diagrams, including those used to sort properties of numbers and shapes.	Continue to complete and interpret information in a variety of sorting diagrams, including those used to sort properties of numbers and shapes.
Present and interpret data		Present and interpret data in block diagrams using practical equipment.	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.
Solve problems using data		Ask and answer simple questions by counting the number of objects in each category. Ask and answer questions by comparing categorical data.	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. 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 all types of graphs, including a line graph.	Solve comparison, sum and difference problems using information presented in all types of graphs.

Averages						Calculate and interpret the mode, median, and range.	Calculate and interpret the mean as an average.

Impact (End Points)

EYFS	Key Stage 1		Key Stage 2			
End of Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Children in Reception through cardinality and counting can count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number through comparison and composition knowledge. Using quantities. And objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, having and sharing- composition. Children use everyday language to talk about the size, weight, capacity, position, distance, time and money, to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday	Children in Year 1 should be able to count to 30 and identify number bonds to 10 and 20. They should be able to. Add and subtract 2 groups and write number sentences to show this. They should be able to use resources to show their reasoning. Children should be able to identify a range of simple 2D and 3D shapes and recall basic properties. They can divide objects into groups and draw simple arrays. They can identify coins and measure,	Children in Year 2 will be able to count to 100 and beyond. They will use place value to add and subtract a two-digit and a two- digit number beginning to show exchange and carrying. They know there 2, 5 and 10 times tables. They can name and describe common 2D and 3D shapes. They can show mastery in the way that they use their written methods and understand word problems. They would be confident using bar models and part-whole models. They understand the fractions, halves, quarters and thirds.	Children in year 3 have a secure understanding of place value to three- digit numbers and can use the column method confidently to add and subtract 3-digit numbers. They will have a secure knowledge of the 3, 4 and 8 times tables and will be able to use written methods for	Children in Year 4 have a growing confidence with place value, using these skills within both written and mental calculations for all four operations. Children will have developed a better understanding of mathematical reasoning.	Children in Year 5 are prepared for Key Stage 2 SATs through their knowledge of mathematical concepts and the ability to explain and reason their mathematical thinking using a wide range of vocabulary.	Children in Year 6 are prepared for transition to Key Stage 3 through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary.

objects and shapes and use mathematical language to describe them.	simple lengths, heights, capacities and volumes.	They recognise and use coins. They can tell the time to the nearest 15 minutes.	multiplication and division.			