



Skills & Knowledge								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number - Place Value								
Counting	<p>Quickly recognise groups of up to 3 objects, without having to count them individually ('subitising')</p> <p>Say numbers in order past five</p> <p>Say one number for each item in order: 1,2,3,4,5,</p> <p>Know that the last number reached when counting a small set of objects tells me how many there are in total (this is called the 'cardinal principle')</p> <p>Show 'finger numbers' up to 5</p>	<p>ELG (Number): Subitise (recognise quantities without counting) up to 5</p> <p>ELG (Numerical Patterns): Verbally count beyond 20, recognising the pattern of the counting system</p> <p>Count out up to 10 objects from a larger group</p>	<p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p>Count in multiples of twos, fives and tens</p>	<p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p>	<p>Count from 0 in multiples of 4, 8, 50 and 100</p> <p>Count up and down in tenths</p>	<p>Count in multiples of 6, 7, 9, 25 and 1000</p> <p>Count backwards through zero to include negative numbers</p> <p>Count up and down in hundredths</p>	<p>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</p> <p>Count forwards and backwards in decimal steps</p>	<p>Count forwards or backwards in steps of integers, decimals or powers of 10 for any number</p>
Place Value	<p>Match the correct numeral (number symbol) to the right amount, up to 5, e.g.</p>	<p>ELG (Number): Have a deep understanding of numbers to 10, including the composition</p>	<p>Read and write numbers to 100 in numerals</p> <p>Read and write numbers from 1 to</p>	<p>Read and write numbers to at least 100 in numerals and in words</p>	<p>Read and write numbers up to 1000 in numerals and in words</p> <p>Read and write numbers with one</p>	<p>Read and write numbers to at least 10 000</p> <p>Read and write numbers with up to two decimal places</p>	<p>Read and write numbers to at least 1 000 000</p> <p>Read and write numbers with up</p>	<p>Read and write numbers up to 10 000 000</p> <p>Determine the value of each digit in</p>



SACRED HEART CATHOLIC PRIMARY SCHOOL AND NURSERY

END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>point to the number 3 when I count 3 snails.</p> <p>I like to experiment with making my own marks and symbols as well as numerals</p>	<p>of each number</p>	<p>20 in numerals and words</p> <p>Begin to recognise the place value of numbers beyond 20 (tens and ones)</p> <p>Identify and represent numbers using objects and pictorial representations including the number line</p>	<p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Partition numbers in different ways (for example, $23 = 20 + 3$ and $23 = 10 + 13$)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p>	<p>decimal place</p> <p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>Identify the value of each digit to one decimal place</p> <p>Partition numbers in different ways (for example, $146 = 100 + 40 + 6$ & $146 = 130 + 16$)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p>	<p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</p> <p>Identify the value of each digit to two decimal places</p> <p>Partition numbers in different ways (for example, $2.3 = 2 + 0.3$ and $2.3 = 1 + 1.3$)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p>	<p>to three decimal places</p> <p>Determine the value of each digit in numbers to at least 1 000 000</p> <p>Identify the value of each digit to three decimal places</p> <p>Identify, represent and estimate numbers using the number line</p>	<p>numbers up to 10 000 000</p> <p>Identify the value of each digit to three decimal places</p> <p>Identify, represent and estimate numbers using the number line</p>
Comparing and Ordering	<p>Use mathematical words to compare amounts 'more than', 'fewer than'</p>	<p>ELG (Numerical Patterns): Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity</p> <p>Understand the</p>	<p>Use the language of: equal to, more than, less than (fewer), most, least</p> <p>Given a number, identify one more and one less</p>	<p>Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs</p> <p>Find 1 or 10 more or less than a given number</p>	<p>Compare and order numbers up to 1000</p> <p>Compare and order numbers with one decimal place</p> <p>Find 1, 10 or 100 more or less than a given number</p>	<p>Order and compare numbers beyond 1000</p> <p>Order and compare numbers with the same number of decimal places up to two decimal places</p> <p>Find 0.1, 1, 10, 100 or 1000 more or less than a given number</p>	<p>Order and compare numbers to at least 1 000 000</p> <p>Order and compare numbers with up to three decimal places</p> <p>Find 0.01, 0.1, 1, 10, 100, 1000 and other powers of 10 more or less than a given number</p>	<p>Order and compare numbers up to 10 000 000</p> <p>Order and compare numbers including integers, decimals and negative numbers</p> <p>Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more or less than a given number</p>



SACRED HEART CATHOLIC PRIMARY SCHOOL AND NURSERY

END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<p>'one more than/one less than' relationship between consecutive numbers</p> <p>Compare numbers, put numerals in order</p>						
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	<p>Round any number to the nearest 10, 100 or 1000</p> <p>Round decimals with one decimal place to the nearest whole number</p>	<p>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p>	<p>Round any whole number to a required degree of accuracy</p> <p>Round decimals with three decimal places to the nearest whole number or one or two decimal places</p>
Multiplying 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, identifying the value of the digits in the answer	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 whole numbers and those involving decimals by 10, 100 and 1000	Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
Negative Numbers						Count backwards through zero to include negative numbers (see counting)	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



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Roman Numerals					Read Roman numerals from I to XII (see time)	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	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	
Solving 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 and practical problems that involve all of the above
<u>Addition and Subtraction</u>								
Understanding Addition and Subtraction			Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting) Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Understand subtraction as take away and difference (how many more, how many less/fewer)	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction facts		ELG (Number): 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.	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 Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes)	Recall and use addition and subtraction facts for 100 (multiples of 5 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 1 and 10 (with decimal numbers to one decimal place)	Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place) Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)	Recall and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)
Mental Methods		ELG (Number): 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.	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, including: -a two-digit number and ones -a two-digit number and tens -two two-digit numbers -adding three one-digit numbers	Select a mental strategy appropriate for the numbers involved in the calculation Add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds	Select a mental strategy appropriate for the numbers involved in the calculation Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place	Select a mental strategy appropriate for the numbers involved in the calculation Add and subtract numbers mentally with increasingly large numbers and decimals to two 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



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Written Methods			*Written methods are informal at this stage – see mental methods for expectation of calculations	*Written methods are informal at this stage – see mental methods for expectation of calculations	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate	Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction)	Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)
Estimating and checking calculations				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
Addition and Subtraction Problems, including with missing numbers			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 including those with missing numbers: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and	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 problems involving missing numbers	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve addition and subtraction problems involving missing numbers	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division, including those with missing numbers



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				written methods				
<u>Multiplication and Division</u>								
Understanding Multiplication and Division				<p>Understand multiplication as repeated addition</p> <p>Understand division as sharing and grouping and that a division calculation can have a remainder</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method)</p> <p>Understand that division is the inverse of multiplication and vice versa</p> <p>Understand how multiplication and division statements can be represented using arrays</p> <p>Understand division as sharing and grouping and use each appropriately</p>	<p>Choose an appropriate strategy to solve a based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method)</p> <p>Recognise and use factor pairs and commutativity in mental calculations</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method)</p> <p>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method)</p>



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Multiplication and Division facts		ELG (Numerical Patterns): Explore and represent patterns within numbers up to 10 including evens and odds, double facts and how quantities can be distributed equally	Recall and use doubles of all numbers to 10 and corresponding halves	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10) Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Derive and use doubles of all numbers to 100 and corresponding halves Derive and use doubles of all multiples of 50 to 500	Recall multiplication and division facts for multiplication tables up to 12×12 Use partitioning to double or halve any number, including decimals to one decimal place	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) Use partitioning to double or halve any number, including decimals to two decimal places	Identify common factors, common multiples and prime numbers Use partitioning to double or halve any number
Mental Methods				Calculate mathematical statements for multiplication (using repeated addition) and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs	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 methods	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 Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	Perform mental calculations, including with mixed operations and large numbers



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Written Methods		Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and “+” or “-”	<i>Written methods are informal at this stage – see mental methods for expectation of calculations</i>	<i>Written methods are informal at this stage – see mental methods for expectation of calculations</i>	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 a one-digit number using formal written layout Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Multiply one-digit numbers with up to two decimal places by whole numbers Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context Use written division methods in cases where the answer has up to two decimal places
Estimating and checking strategies					Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 arrays with the support of the teacher	Solve problems involving multiplication and division (including those with remainders), 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 (and interpreting remainders), 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 remainders), integer scaling problems and harder correspondence problems such as n objects are connected to m objects	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Solve problems involving addition, subtraction, multiplication and division
	<u>Fractions</u>							
Understanding Fractions			Understand that a fraction can describe part of a whole Understand that a unit fraction represents one equal part of a whole	Understand and use the terms numerator and denominator Understand that a fraction can describe part of a set Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be	Show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$) Understand that finding a fraction of an amount relates to division	Understand that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$)		



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions of objects, shapes and quantities			<p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure)</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure)</p>	<p>Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or quantity</p>	<p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p>	<p>Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators</p>	<p>Recognise mixed numbers and improper fractions and convert from one form to the other</p> <p>Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)</p>	
Counting, comparing and ordering fractions				<p>Count on and back in steps of halves and quarters</p>	<p>Count on and back in steps of halves, quarters and thirds.</p> <p>Compare and order unit fractions and fractions with the same denominators (including on a number line)</p>	<p>Count on and back in steps of unit fractions and fractions with the same denominators (including on a number line) (continued from Year 3)</p>	<p>Count on and back in mixed number steps such as 1 and $\frac{1}{2}$</p> <p>Compare and order fractions whose denominators are all multiples of the same number (including on a number line)</p>	<p>Compare and order fractions, including fractions >1 (including on a number line)</p>



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Equivalence				Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	Recognise and show, 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 to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise and use thousandths 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 equivalents e.g. 0.375 for a simple fraction e.g. $\frac{3}{8}$
Calculating with fractions					Add and subtract fractions with the same denominator within one whole (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	Add and subtract fractions with the same denominator (using diagrams)	Add and subtract fractions with the same denominator and denominators that are multiples of the same number Write mathematical statements >1 as a mixed number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Multiply simple pairs of proper fractions, writing the answer in its simplest form (using diagrams) Divide proper fractions by whole numbers (using diagrams) $\frac{1}{2} \div 2 = \frac{1}{4}$



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Percentages							Recognise the percent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	Find simple percentages of amounts
Solving problems involving fractions, decimals and percentages					Solve problems that involve all of the above	<p>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</p> <p>Solve simple measure and money problems involving fractions and decimals to two decimal places</p>	<p>Solve problems involving fractions</p> <p>Solve problems involving numbers up to three decimal places</p> <p>Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{3}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25</p>	<p>Solve problems involving fractions</p> <p>Solve problems which require answers to be rounded to specified degrees of accuracy</p> <p>Solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison</p>



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Ratio and Proportion								<p>Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts</p> <p>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</p>

Algebra

Note: Although algebraic notation is not formally introduced until Year 6, algebraic thinking starts much earlier as exemplified by the below missing number objectives.



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra			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 relationship between addition and subtraction and use this to check calculations and solve missing number problems	Solve problems, including missing number problems			Express missing number problems algebraically Use 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
<u>Measurement</u>								
Height/Length	Make comparisons between objects relating to size, length, weight and capacity.	Compare length, weight and capacity.	Measure and begin to record lengths and heights, using non-standard and then manageable standard units (m and cm) within children's range of counting competence Compare and describe lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit using rulers Compare and order lengths and record the results using $>$, $<$ and $=$	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 Understand and use approximate equivalences between metric and common imperial units such as inches	Use, read and write standard units of length using decimal notation to three decimal places



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Perimeter					Understand that perimeter is a measure of distance around the boundary of a shape 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
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), and including using standard units, square centimetres (cm ²) and square metres (m ²) 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			Measure and begin to record mass/weight, using non-standard and then standard units (kg and g) within children's range of counting Competence Compare and describe mass/weight (for example, heavy/light, heavier than, lighter than)	Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales Compare and order mass and record the results using >, < and =	Measure, add and subtract mass (kg/g) Compare mass (kg/g)	Estimate and calculate Mass Compare mass	Use, read and write standard units of mass to a suitable degree of Accuracy Understand and use approximate equivalences between metric and common imperial units such as pounds	Use, read and write standard units of mass using decimal notation to three decimal places



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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Capacity/ Volume		Compare length, weight and capacity.	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, half full, quarter)	Choose and use appropriate standard units to estimate and measure capacity and volume (litres/ml) to the nearest appropriate unit using measuring vessels Compare and order volume/capacity and record the results using $>$, $<$ and $=$	Measure, add and subtract volume/capacity (l/ml) Compare volume/capacity (l/ml)	Estimate and calculate volume/capacity Compare volume/capacity	Estimate (and calculate) volume (for example, using 1 cm^3 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 three decimal places Calculate and estimate volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units (for example, mm^3 and km^3) Compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units (for example, mm^3 and km^3)
Temperature				Choose and use appropriate standard units to estimate and measure temperature to the nearest degree ($^{\circ}\text{C}$) using thermometers	Continue to estimate and measure temperature to the nearest degree ($^{\circ}\text{C}$) using thermometers	Order temperatures including those below 0°	Order temperatures including those below 0°	Calculate differences in temperature, including those that involve a positive and negative temperature



SACRED HEART CATHOLIC PRIMARY SCHOOL AND NURSERY

END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Conversion						Convert between different units of measure (e.g. kilometre to metre; hour to minute)	Convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; 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



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END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Time			<p>Recognise and use language relating to dates, including days of the week, weeks, months and years</p> <p>Compare and describe time (for example, quicker, slower, earlier, later)</p> <p>Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)</p> <p>Measure and begin to record time (hours, minutes, seconds)</p> <p>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</p>	<p>Compare and sequence intervals of time</p> <p>Know the number of minutes in an hour and the number of hours in a day</p> <p>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</p>	<p>Record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</p> <p>Know the number of seconds in a minute, and the number of days in each month, year and leap year</p> <p>Know the number of seconds in a minute, and the number of days in each month, year and leap year</p> <p>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>Estimate and read time with increasing accuracy to the nearest minute</p> <p>Compare durations of events (for example to calculate the time taken by particular events or tasks)</p>	<p>Convert between different units of time, e.g. hour to minute</p> <p>Read, write and convert time between analogue and digital 12 and 24-hour clocks</p>	<p>Convert between units of time in a problem solving context</p> <p>Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks</p>	<p>Use, read and write standard units of time</p>



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END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Money			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 Add and subtract money of the same unit, including giving change	Continue to recognise and use symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence Recognise that ten 10p coins are equivalent to £1 and that each coin is of £1 Add and subtract amounts of money to give change, using both £ and p in practical contexts	Write amounts of money using decimal notation Recognise that one hundred 1p coins are equivalent to £1 and that each coin is of £1 Estimate, compare and calculate money in pounds and pence		
Problems involving money and measure			Solve practical problems for: - lengths and heights - mass/weight - capacity and volume - time	Solve simple problems in a practical context involving addition and subtraction of money <i>and measures (including time)</i>	<i>Solve problems involving money and measures and simple problems involving passage of time</i>	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days <i>and problems involving money and measures</i>	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 and conversion of units of measure <i>(including money and time)</i> , using decimal notation up to three decimal places where appropriate



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END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Properties of Shape	<p>Explore 2D (flat) and 3D (solid) shapes.</p> <p>Talk about shapes using everyday words like 'pointy'.</p> <p>Use mathematical words like: 'sides', 'corners', 'straight', 'flat', 'round'.</p> <p>Choose the right shape when building, e.g. triangular prism for a roof.</p> <p>Combine shapes to make new ones - an arch, a bigger triangle etc.</p>	<p>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</p>	<p>Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles</p>	<p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid)</p> <p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p>	<p>Draw 2-D shapes and describe them</p> <p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p> <p>Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p>	<p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2-D shapes presented in different Orientations</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry</p> <p>Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p> <p>Compare and classify geometric shapes based on their properties and sizes</p>	<p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p> <p>Use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p>Identify 3-D shapes, including cubes and other cuboids, from 2-D representations</p>	<p>Compare and classify geometric shapes based on their properties and sizes Draw 2-D shapes using given dimensions and Angles</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</p> <p>Recognise, describe and build simple 3-D shapes, including making nets</p>



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 and anti-clockwise)	Recognise angles as a property of shape or a description of a turn Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	Identify acute and obtuse angles and compare and order angles up to two right angles by size	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°) Identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and $\frac{1}{2}$ 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 Find unknown angles in any triangles, quadrilaterals, and regular polygons
Patterns	Talk about and identify patterns that I see around me, e.g. stripes on clothes, designs on wallpaper. Use everyday language like 'pointy', 'spotty', 'blobs' etc. Make and extend ABAB patterns – stick, leaf, stick, leaf.	Continue, copy and create repeating patterns.	Recognise and create repeating patterns with objects and shapes	Order and arrange combinations of mathematical objects in patterns and sequences				



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END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>Spot an error in a repeating pattern and correct it</p> <p>Learn to use words such as 'first', 'then' 'after' to describe a pattern of events.</p>							
Position and Direction	<p>Understand position through words alone, e.g. "The bag is under the table." – with no pointing.</p> <p>Describe a familiar route.</p> <p>Talk about routes and locations, using words like 'in front of' and 'behind'.</p>	<p>Select, rotate and manipulate shapes in order to develop spatial reasoning skills.</p>	<p>Describe position and direction</p>	<p>Use mathematical vocabulary to describe position, movement, including movement in a straight line</p>				



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END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Coordinates (including reflection and translation)					Describe positions on a square grid labelled with letters and numbers	Describe positions on a 2-D 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 translation, using the appropriate language, and know that the shape has not changed	Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Sorting and Classifying			Sort objects, numbers and shapes to a given criterion and their own	Compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects	Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D 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 and 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



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END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Problems involving 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 (for example, ‘How many more?’ and ‘How many fewer?’) using information presented in scaled bar charts and pictograms and tables	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Solve comparison, sum and difference problems using information presented in all types of graph including a line graph	Solve comparison, sum and difference problems using information presented in all types of graph
Averages								Calculate and interpret the mean as an average



Impact (End Points)							
End Points Expected Standard	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Children develop confidence and mental fluency at each stage in their mathematical learning. They are fluent in the fundamentals of mathematics, reason mathematically and solve problems by applying their mathematics to a variety of problems.						
	<p>Have a deep understanding of number to 10, including the composition of each number.</p> <p>Able to subitise (recognise quantities without counting) up to 5.</p> <p>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.</p> <p>Able to verbally count beyond 20, recognising the pattern of the counting system.</p> <p>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</p> <p>Able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</p>	<p>Count within 100, forwards and backwards, starting with any number.</p> <p>Reason about the location of numbers to 20 within the number system, including comparing using $<$ $>$ and $=$</p> <p>Develop fluency in addition and subtraction facts within 10.</p> <p>Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.</p> <p>Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</p> <p>Read, write and interpret equations containing addition),</p>	<p>Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning.</p> <p>Reason about the location of any two-digit number in the number system, including identifying the previous and next multiple of 10.</p> <p>Secure fluency in addition and subtraction facts within 10, through continued practice.</p> <p>Add and subtract across 10.</p> <p>Recognise the subtraction structure of 'difference' and answer questions of the form, "How</p>	<p>Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply to work out how many 10s there are in other three-digit multiples of 10.</p> <p>Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.</p> <p>Reason about the location of any three-digit number in the number system, including identifying the previous and next multiple of 100 and 10.</p> <p>Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/ number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>	<p>Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100</p> <p>Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning.</p> <p>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, and rounding to the nearest of each.</p> <p>Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</p> <p>Recall multiplication and division facts up to , and recognise products in multiplication tables as</p>	<p>Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.</p> <p>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 nonstandard partitioning</p> <p>Reason about the location of any number with up to 2 decimals places in the number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.</p> <p>Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number</p>	<p>Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</p> <p>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 nonstandard partitioning.</p> <p>Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.</p>



	<p>subtraction and equals symbols, and relate additive expressions and equations to real-life contexts.</p> <p>Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.</p>	<p>many more...?"</p> <p>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.</p> <p>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.</p> <p>Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.</p> <p>Relate grouping problems where the number of groups is unknown to multiplication</p>	<p>Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</p> <p>Recall multiplication and division facts in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.</p> <p>Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</p> <p>Calculate complements to 100.</p> <p>Add and subtract up to three-digit numbers using columnar methods.</p> <p>Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure.</p> <p>Understand and use the commutative</p>	<p>multiples of the corresponding number. Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.</p> <p>Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)</p> <p>Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.</p> <p>Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication</p> <p>Understand and apply the distributive property of multiplication.</p> <p>Reason about the location of mixed numbers in the linear number system.</p> <p>Convert mixed numbers to improper fractions and vice versa.</p>	<p>lines marked in units of 1 with 2, 4, 5 and 10 equal parts.</p> <p>Convert between units of measure, including using common decimals and fractions.</p> <p>Secure fluency in multiplication and division facts</p> <p>Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</p> <p>Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size</p> <p>Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors</p> <p>Multiply any whole number with up to 4 digits by any one-digit</p>	<p>Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</p> <p>Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</p> <p>Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</p> <p>Solve problems involving ratio relationships.</p> <p>Solve problems with 2 unknowns.</p> <p>Recognise when fractions can be</p>
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			<p>equations with a missing factor, and to division equations (quotitive division)</p> <p>Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.</p>	<p>property of addition, and understand the related property for subtraction.</p> <p>Apply known multiplication and division facts to solve contextual problems</p> <p>Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts</p> <p>Find unit fractions of quantities using known division facts (multiplication tables fluency).</p> <p>Reason about the location of any fraction within 1 in the linear number system.</p> <p>Add and subtract fractions with the same denominator, within 1.</p> <p>Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.</p>	<p>Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</p> <p>Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.</p> <p>Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.</p>	<p>number using a formal written method.</p> <p>Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context</p> <p>Find non-unit fractions of quantities.</p> <p>Find equivalent fractions and understand that they have the same value and the same position in the linear number system.</p> <p>Recall decimal fraction equivalents for halves, quarters, fifths and tenths and for multiples of these proper fractions.</p> <p>Compare angles, estimate and measure angles in degrees ($^{\circ}$) and draw angles of a given size.</p> <p>Compare areas and calculate the area of rectangles (including squares) using standard units.</p>	<p>simplified, and use common factors to simplify fractions.</p> <p>Express fractions in a common denomination and use this to compare fractions that are similar in value.</p> <p>Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.</p> <p>Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.</p>
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<p>End Points & Challenge for Most Able</p>	<p>Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content.</p> <p>EYFS</p> <ul style="list-style-type: none">● Reason about numbers to 10, confidently explaining their findings to practical enquiries● Confidently estimate a number of objects● Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups <p>KS1</p> <ul style="list-style-type: none">● Read scales where not all numbers on the scale are given and estimate points in between● Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts● Use reasoning about numbers and relationships to solve more complex problems and explain their thinking (e.g. $29 + 17 = 15 + 4 +$; ‘together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?’ etc.)● Solve unfamiliar word problems that involve more than one step (e.g. ‘which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?’)● Read the time on a clock to the nearest 5 minutes● Describe similarities and differences of 2-D and 3-D shapes, using their properties (e.g. that two different 2-D shapes both have only one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices, but different dimensions). <p>KS2</p> <p>As well as achieving mastery in all of the End Points set out in the above for the Expected Standard, developing mastery with greater depth is characterised by pupils’ ability to:</p> <ul style="list-style-type: none">● Grasp new concepts rapidly● Solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination;● Independently explore and investigate mathematical contexts and structures, communicate results clearly and systematically explain and generalise the mathematics.
<p>End Points & Challenge for Least Able</p> <p>Children working below ARE</p>	<p>At Sacred Heart Catholic Primary School and Nursery, we have high expectations which are deliberately ambitious for ALL learners. Therefore, teachers plan to address areas of difficulty and to remove potential barriers to pupil achievement. For those children struggling, teaching and targeted support may be weighted towards the ready-to-progress criteria. Those who are not sufficiently fluent with earlier material will consolidate their understanding, including through additional practice.</p> <p>EYFS</p> <ul style="list-style-type: none">● Subitise one, two and three objects● Compares two small groups of up to five objects, saying when the groups are the same● Recognise that the last number said represents the total counted so far● Explores using a range of their own marks and signs which they ascribe mathematical meanings● Begin to recognise numbers 0-10 <p>KS1</p> <ul style="list-style-type: none">● Read and write numbers in numerals up to 100● Partition a two-digit number into tens and ones to demonstrate an understanding of place value, though they may use structured resources to support them● Add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining their method verbally, in pictures or using apparatus (e.g. $23 + 5$; $46 + 20$; $16 - 5$; $88 - 30$)● Recall at least four of the six2 number bonds for 10 and reason about associated facts (e.g. $6 + 4 = 10$, therefore $4 + 6 = 10$ and $10 - 6 = 4$)● Count in twos, fives and tens from 0 and use this to solve problems● Know the value of different coins● Name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g. triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres) <p>KS2</p>



SACRED HEART CATHOLIC PRIMARY SCHOOL AND NURSERY

END POINTS CURRICULUM PROGRESSION FOR NURSERY TO YEAR 6 - MATHEMATICS

- Children will work towards gaining a secure enough understanding of the standards set out in the End Points for the Expected Standard, with additional support and scaffolding, which will enable them to move through to KS3 with increasing confidence.

SEND: Engagement Model

Children working below NC level

For children with severe, profound and/or multiple learning difficulties working below National Curriculum standards and not engaged in subject specific study, the 'Engagement Model' will be used for assessment.

The five areas of engagement are:

- Exploration
- Realisation
- Anticipation
- Persistence
- Initiation

This model will be used alongside children's individual EHCP and Pupil Progress Plans to plan for and assess children's progression across the bespoke curriculum that they are able to access in line with their strengths and needs.