



St Mary's Catholic Primary School
Maths Curriculum Map (White Rose)
2025-26



| Term | Autumn Weeks 1 - 12 | Spring Weeks 13 - 24 | Summer Weeks 25 - 36 |
|----------------|--|--|---|
| Nursery | <p>Comparison 1</p> <ul style="list-style-type: none"> - More than, Fewer than, same - Explore and compare quantities using concrete objects and real-life contexts. - Recognise and describe large and small amounts through practical investigation. - Make, represent and compare collections of objects. - Compare quantities using mathematical language such as more, less and equal. - Develop early understanding of comparison and estimation of amounts. <p>Shape, Space and Measure 1</p> <ul style="list-style-type: none"> - Explore, manipulate and talk about shapes in the environment and through practical play. - Recognise, describe and compare simple 2D and 3D shapes and objects. - Select and use shapes purposefully for a reason or design. - Begin to notice similarities and differences between shapes and objects. - Develop spatial awareness by positioning and arranging shapes and blocks. <p>Pattern 1</p> <ul style="list-style-type: none"> - Explore repeating patterns - Listen to, recognise and join in with repeated patterns in songs, stories and rhymes. - Clap, move and respond in time with simple musical patterns and rhythms. - Create and continue simple repeating patterns in different contexts (e.g. sounds, actions, objects). - Explore and describe patterns through play and everyday experiences. <p>Counting 1</p> <ul style="list-style-type: none"> - Recognise, say and sequence number names. - Count forwards in a stable order, joining in with oral counting. - Develop fluency and accuracy in verbal counting through regular practice. - Build early number awareness through songs, rhymes and counting experiences. <p>Counting 2</p> <ul style="list-style-type: none"> - Begin to order number names - Recognise, say and use number names 1, 2 and 3 in play and everyday contexts. - Copy and represent small quantities using fingers and objects. - Begin to count actions, objects and sounds in practical activities. - Understand that anything can be counted, developing early counting awareness. - Join in with simple counting sequences and number rhymes. <p>Subitising 1</p> <ul style="list-style-type: none"> - Recognise and respond to small quantities up to 3 in images, stories and play. - Say and copy number language for 1, 2 and 3 in context. - Begin to match spoken number names with quantities and images. - Point to and identify small sets of objects up to 3. - Develop early number awareness through shared books, songs and play-based activities. <p>Pattern 2</p> <ul style="list-style-type: none"> - Join in with repeated actions, phrases and refrains in songs and stories. - Begin to anticipate and say what happens next in familiar stories and routines. - Develop awareness of patterns and sequences through daily routines and shared experiences. - Build confidence in participating in songs, rhymes and storytelling activities. <p>Shape Space and Measure 2</p> <ul style="list-style-type: none"> - Explore, recognise and describe shapes and objects in the environment. - Recognise and match simple shapes, including identifying when objects are the same shape. - Respond to and use simple positional language in play and practical activities. - Arrange and position objects and blocks in purposeful ways. - Develop early spatial awareness through hands-on exploration and construction activities. | <p>Subitising 2</p> <ul style="list-style-type: none"> - Represent and recognise numbers 1, 2 and 3 using fingers and visual models. - Match quantities to numerals in stories and play (up to 3). - Show understanding of small quantities by selecting the correct number of fingers. - Begin to connect number words, objects and representations in practical contexts. - Develop early number sense through visual, spoken and physical representations. <p>Counting 3</p> <ul style="list-style-type: none"> - Join in with counting words through actions, movement and play. - Count and represent small sets of objects (up to 3) from rhymes and songs. - Recognise that numbers can be used as labels for quantities (e.g. 1 and not 1). - Begin to associate number symbols with quantities in practical contexts. - Develop early counting skills through active, hands-on experiences. <p>Shape, Space and Measure 3</p> <ul style="list-style-type: none"> - Explore and manipulate shape resources, including jigsaws and construction materials. - Develop spatial awareness by moving through and into different positions. - Respond to and use simple positional language in play and practical activities. - Recognise and compare simple shapes through hands-on exploration. - Build problem-solving skills through shape-based activities and puzzles. <p>Pattern 3</p> <ul style="list-style-type: none"> - Explore, create and copy simple patterns using objects and blocks. - Make purposeful constructions such as roads and bridges using a range of resources. - Recognise, describe and continue simple repeating arrangements. - Develop early pattern awareness through hands-on play and construction activities. <p>Counting 4</p> <ul style="list-style-type: none"> - Select and work with small groups of objects in practical activities. - Understand and represent small quantities (up to 3) through sharing and grouping. - Take from and give to others using small numbers of objects. - Develop early understanding of counting, sharing and one-to-one correspondence. - Explore quantities through practical play and real-life contexts. <p>Shape, Space and Measure 4</p> <ul style="list-style-type: none"> - Explore and manipulate shapes and blocks to create simple arrangements. - Recognise, match and combine simple shapes in play-based activities. - Develop spatial awareness by following and creating simple routes in indoor and outdoor environments. - Talk about and describe arrangements using everyday language. - Compare and explore collections of objects, noticing differences in quantity. <p>Subitising 3</p> <ul style="list-style-type: none"> - Recognise and respond to small quantities (1, 2 and 3) in different arrangements, including dot patterns. - Subitise simple patterns and say how many without counting (up to 3). - Match number words to quantities in practical and visual contexts. - Develop early number recognition through structured patterns and play. <p>Comparison 2</p> <ul style="list-style-type: none"> - Recognise and compare equal and unequal collections. - Make and match equal groups using a range of objects. - Adjust collections to make them equal. - Develop understanding of equality through practical exploration and play-based activities. | <p>Pattern 4</p> <ul style="list-style-type: none"> - Join in with and perform sequences, songs, rhymes and familiar stories. - Develop confidence in leading and participating in repeated patterns in music and storytelling. - Copy and create simple repeating patterns, including in art and creative activities. - Recognise and engage with patterns in songs, rhymes and stories. - Build independence in recalling and continuing familiar sequences. <p>Shape, Space and Measure 5</p> <ul style="list-style-type: none"> - Explore and match objects, pictures and shapes through practical and puzzle-based activities. - Complete simple jigsaws and shape-matching puzzles. - Develop spatial awareness through small world play, including creating routes with lines and curves. - Recognise objects from different viewpoints, including matching to shadows and images. - Develop problem-solving skills through hands-on exploration of shape and space. <p>Pattern 5</p> <ul style="list-style-type: none"> - Develop musicality through singing independently and joining in with songs and rhymes. - Explore and create movement patterns in response to music and rhythm. - Copy, continue and talk about simple repeating patterns, including AB patterns with support. - Recognise and describe patterns and arrangements using objects and actions. - Develop rhythmic awareness by clapping and moving in time to a steady beat. <p>Subitising 4</p> <ul style="list-style-type: none"> - Develop early subitising skills by recognising small quantities in dot patterns and games. - Match, copy and represent simple quantities using objects, fingers and visual patterns. - Listen to and represent sounds, linking actions and fingers to quantities. - Begin to recognise and compare small groups of objects through play-based activities. <p>Counting 5</p> <ul style="list-style-type: none"> - Count up to 5 objects with increasing accuracy, using one-to-one correspondence. - Represent numbers to 5 using fingers, objects and actions. - Match numerals to quantities in songs, rhymes and practical contexts. - Join in with counting songs to 5, including moving props and acting out sequences. - Develop early number awareness through rhythmic, movement-based counting activities. <p>Pattern 6</p> <ul style="list-style-type: none"> - Recognise, continue and create simple repeating AB patterns. - Notice and correct errors in patterns. - Copy and build simple repeated constructions using a range of resources. - Develop understanding of pattern through hands-on exploration and creative building. <p>Counting 6</p> <ul style="list-style-type: none"> - Count reliably up to 5 objects, including selecting and counting from larger groups. - Develop accurate verbal counting to 5 in a range of contexts. - Represent numbers to 5 using fingers, objects and other representations. - Begin to match quantities to numerals through practical activities. - Explore counting in different ways to build early number understanding. <p>Comparison 3</p> |

| | | | |
|------------------|--|---|--|
| | | | <ul style="list-style-type: none"> - Compare and match objects by type and simple attributes. - Make and recognise equal sets through one-to-one matching. - Compare groups of up to 5 objects using matching strategies. - Develop early classification skills by sorting and grouping objects. - Begin to describe similarities and differences between objects in practical contexts. |
| Reception | <p>Getting to know you</p> <p>Match, sort and compare</p> <ul style="list-style-type: none"> - Recognise and match pictures and objects, identifying similarities and differences - Sort objects into sets using given and self-created sorting rules - Describe and create simple criteria for grouping and sorting - Compare quantities and use mathematical language to describe more, fewer and equal amounts <p>Talk about measure and patterns</p> <ul style="list-style-type: none"> - Compare and describe size, mass and capacity using appropriate mathematical language - Explore, copy and continue simple repeating patterns using objects, shapes and numbers - Identify patterns in everyday contexts and describe what comes next <p>It's me 1,2,3</p> <ul style="list-style-type: none"> - Subitise, find and represent numbers 1, 2 and 3 in different ways - Understand the composition of numbers 1, 2 and 3 as parts and wholes - Identify 1 more and 1 less within numbers up to 3 - Develop early number sense through counting, recognition and comparison of small numbers <p>Circles and Triangles</p> <ul style="list-style-type: none"> - Identify, name and compare common 2D shapes, including circles and triangles - Recognise and describe shapes in the environment - Describe the position of shapes using appropriate positional language - Use mathematical vocabulary to compare and talk about basic shape properties <p>1,2,3,4,5</p> <ul style="list-style-type: none"> - Subitise, find and represent numbers 4 and 5 in different ways - Understand the composition of numbers 1–5 using parts and wholes - Identify 1 more and 1 less within numbers up to 5 - Develop fluency with counting, comparing and representing small numbers <p>Shapes with 4 sides</p> <ul style="list-style-type: none"> - Identify and name common 2D shapes with four sides (quadrilaterals) - Combine and manipulate shapes to create new composite shapes - Recognise and describe shapes with four sides in the environment - Use mathematical vocabulary to describe properties of 2D shapes | <p>Alive in 5</p> <ul style="list-style-type: none"> - Introduce and understand the concept of zero as 'none' or 'nothing' - Subitise, find and represent numbers 0–5 in different ways - Identify 1 more and 1 less within numbers 0–5 - Develop early number sense through counting, recognition and comparison of small numbers <p>Mass and Capacity</p> <ul style="list-style-type: none"> - Compare mass using practical resources and mathematical language (heavier/lighter, equal) - Use balance scales to compare and check mass - Explore and compare capacity using containers and everyday objects - Develop early understanding of measurement through practical investigation and comparison <p>Growing 6,7,8</p> <ul style="list-style-type: none"> - Find, represent and subitise numbers 6, 7 and 8 in different ways - Identify 1 more and 1 less within numbers up to 8 - Explore the composition of numbers 6, 7 and 8 using parts and wholes - Recognise odd and even numbers through making pairs - Find and make doubles up to 8 to support early number fluency <p>Length, height and time</p> <ul style="list-style-type: none"> - Explore, compare and order length and height using appropriate vocabulary and practical measurement - Use standard and non-standard units to measure and compare length and height - Sequence and order events in time using everyday language and time vocabulary - Develop understanding of time by ordering events and recognising simple time sequences <p>Building 9 and 10</p> <ul style="list-style-type: none"> - Subitise, find and represent numbers up to 10 in different ways - Compare numbers within 10 using mathematical language - Identify 1 more and 1 less within 10 - Develop number bonds to 10 and use them to support mental calculation - Find and make doubles within 10 - Recognise odd and even numbers and begin to explain patterns - Build fluency with counting, composition and representation of numbers to 10 <p>Explore 3-D shapes</p> <ul style="list-style-type: none"> - Recognise, name and describe common 3D shapes - Identify and describe 2D shapes within 3D shapes - Use 3D shapes in practical tasks and investigations - Recognise 3D shapes in the environment - Identify, copy and continue simple repeating patterns using shapes and objects | <p>To 20 and beyond</p> <ul style="list-style-type: none"> - Build, represent and understand numbers beyond 10, including 10–13 and 14–20 - Develop secure verbal counting beyond 20 - Identify, continue and create patterns using numbers beyond 10 - Strengthen number sense through composition, sequencing and pattern recognition within and beyond 20 <p>How many now?</p> <ul style="list-style-type: none"> - Understand addition as combining and adding more to a set - Identify and describe how many have been added in a calculation - Understand subtraction as taking away from a set - Identify and describe how many have been taken away - Use practical and pictorial representations to support addition and subtraction within simple contexts <p>Manipulate, compose and decompose</p> <ul style="list-style-type: none"> - Select and use shapes for specific purposes in practical contexts - Rotate and manipulate 2D and 3D shapes to explore their properties - Compose and decompose shapes to form new shapes and patterns - Copy and recreate 2D shape pictures using accurate positioning - Identify 2D shapes within 3D shapes and in the environment <p>Sharing and grouping</p> <ul style="list-style-type: none"> - Explore sharing and grouping quantities into equal parts - Understand even and odd numbers through practical sharing activities - Recognise and use doubling as a way of building number fluency - Use objects, pictures and practical resources to support early division and multiplication concepts <p>Visualise, build and map</p> <ul style="list-style-type: none"> - Identify, create and continue repeating patterns using units, objects, scenes and constructions - Replicate, build and represent 2D and 3D models from different viewpoints - Visualise, describe and build shapes and structures using positional language - Use maps, models and familiar places to represent simple locations and routes - Create and interpret simple maps from familiar environments <p>Make connections</p> <ul style="list-style-type: none"> - Deepen Understanding - Patterns and relationships. |
| Year 1 | <p>Place value (within 10)</p> <ul style="list-style-type: none"> - Count, recognise and represent numbers in different forms, including numerals and number words - Count forwards and backwards, including from any given number, within 10 - Understand and use number relationships, including one more/less, fewer/more/same and greater than/less than - Compare and order numbers and objects using appropriate mathematical language - Use number lines to support counting, comparison and ordering of numbers <p>Addition and Subtraction (within 10)</p> <ul style="list-style-type: none"> - Understand the part–whole model to represent numbers and relationships - Use and write number sentences to represent addition and subtraction - Develop fluency with addition and subtraction facts, including fact families and number bonds within 10 - Add and subtract quantities using practical, visual and number line strategies - Solve problems involving finding parts of a whole and “how many left?” contexts - Add and subtract 1 or 2, using counting on and back strategies <p>Geometry (Shape)</p> <ul style="list-style-type: none"> - Recognise, name and describe common 2D and 3D shapes | <p>Place Value (Within 20)</p> <ul style="list-style-type: none"> - Count, read and represent numbers within 20 - Understand the composition of numbers 10–20 - Use and interpret number lines to 20, including estimating positions - Compare and order numbers to 20 using mathematical language and symbols - Develop number sense through estimation, counting and reasoning within 20 <p>Addition and Subtraction (within 20)</p> <ul style="list-style-type: none"> - Use number bonds within 20 to support addition and subtraction - Add and subtract within 20 using counting on, counting back and number bonds - Understand and apply doubles and near doubles to support mental calculation - Find number bonds to 20 and use them to solve missing number problems - Subtract by finding the difference and using part–whole relationships - Solve addition and subtraction problems, including missing number equations <p>Place value (within 50)</p> <ul style="list-style-type: none"> - Count, read and represent numbers from 20 to 50, including counting in tens (20, 30, 40, 50) - Understand and use groups of tens and ones, including partitioning numbers into tens and ones | <p>Multiplication and Division</p> <ul style="list-style-type: none"> - Count in steps of 2, 5 and 10 and recognise patterns in number sequences - Recognise and represent equal groups using objects, arrays and pictorial models - Understand multiplication as repeated addition and use it to add equal groups - Understand division as sharing and grouping into equal parts - Use doubles and arrays to support fluency with equal groups and early multiplication facts <p>Fractions</p> <ul style="list-style-type: none"> - Recognise and find halves and quarters of objects, shapes and quantities - Understand halves and quarters as equal parts of a whole - Use practical and pictorial representations to identify and show fractions - Apply knowledge of fractions to solve simple problems involving sharing and division <p>Position and Direction</p> <ul style="list-style-type: none"> - Describe and understand position and direction using left/right, forwards/backwards and above/below - Describe and follow turns and movements using appropriate directional language - Use ordinal numbers to describe position and order |

| | | | |
|---------------|--|---|---|
| | <ul style="list-style-type: none"> - Sort and classify shapes using simple properties (e.g. sides, corners, faces) - Create and continue patterns using 2D and 3D shapes - Use mathematical language to compare and describe shape properties | <ul style="list-style-type: none"> - Use number lines to 50 to represent, compare and estimate numbers - Identify 1 more and 1 less than a given number within 50 - Solve missing number problems using number knowledge, patterns and place value understanding <p>Length and Height</p> <ul style="list-style-type: none"> - Compare and order lengths and heights using appropriate mathematical language - Measure length using non-standard and standard units - Measure accurately in centimetres using rulers and practical equipment - Apply measurement skills to describe, compare and solve simple length problems <p>Mass and Volume</p> <ul style="list-style-type: none"> - Compare and describe mass using language such as heavier and lighter - Measure and compare mass using simple and standard units - Understand and compare volume and capacity, including full and empty - Measure and compare capacity using practical equipment and appropriate units - Apply measurement skills to solve simple real-life problems involving mass and capacity | <ul style="list-style-type: none"> - Apply positional language to describe and follow routes and instructions <p>Place Value (within 100)</p> <ul style="list-style-type: none"> - Count, read and represent numbers from 50 to 100, including counting in tens - Understand and use place value to partition numbers into tens and ones - Use number lines to 100 to represent, estimate, compare and order numbers - Identify 1 more and 1 less than any given number within 100 - Compare numbers using place value knowledge, including numbers with the same number of tens - Use mathematical language and symbols to compare any two numbers accurately <p>Money</p> <ul style="list-style-type: none"> - Recognise and understand the value of coins and notes in UK currency - Count in coins and combine values to find totals - Use unitising to understand money as units of value - Apply knowledge of money to simple real-life counting and comparison problems <p>Time</p> <ul style="list-style-type: none"> - Understand and use vocabulary related to time, including before and after - Name and sequence days of the week and months of the year - Understand and use units of time (hours, minutes and seconds) - Tell the time to the hour and half past the hour using analogue clocks - Apply time language and sequencing to daily events and routines |
| Year 2 | <p>Place value</p> <ul style="list-style-type: none"> - Count, read and write numbers to 100 in numerals and words. - Understand place value in two-digit numbers, recognising and representing tens and ones in different ways. - Partition and recombine numbers to 100, including using flexible partitioning and expanded form. - Represent and estimate numbers using number lines and place value charts. - Compare, order and count numbers, including counting in steps of 2, 3, 5 and 10. <p>Addition and Subtraction</p> <ul style="list-style-type: none"> - Recall and use number bonds and related addition and subtraction facts within 20 and to 100 (tens). - Add and subtract one- and two-digit numbers using a range of mental and written strategies, including bridging through 10. - Find 10 more or 10 less than a number and add or subtract multiples of 10. - Use inverse operations and fact families to solve and check calculations. - Compare, represent and solve addition and subtraction problems, including missing number and number sentence problems. <p>Shape</p> <ul style="list-style-type: none"> - Recognise, name and draw 2-D and 3-D shapes. - Identify and describe the properties of 2-D and 3-D shapes, including sides, faces, edges and vertices. - Recognise and use lines of symmetry, including completing symmetrical shapes. - Sort and classify 2-D and 3-D shapes according to their properties. - Create, continue and describe patterns using 2-D and 3-D shapes. | <p>Money</p> <ul style="list-style-type: none"> - Count and recognise money in pence, pounds, and pounds and pence - Identify and choose appropriate notes and coins to represent amounts - Make equivalent amounts of money using different combinations of coins and notes - Compare, order and calculate with money in real-life contexts - Understand how to make a pound and find change using addition and subtraction skills <p>Multiplication and Division</p> <ul style="list-style-type: none"> - Understand multiplication and division through equal groups, sharing and grouping. - Represent and solve multiplication and division calculations using symbols, number sentences and arrays. - Recall and apply multiplication and division facts for the 2, 5 and 10 times tables. - Explore doubling, halving, and odd and even numbers in relation to multiplication and division. <p>Length and height</p> <ul style="list-style-type: none"> - Measure and record lengths and heights using standard units, including centimetres and metres. - Compare and order lengths and heights using appropriate mathematical vocabulary. - Solve problems involving lengths and heights using the four operations. <p>Mass Capacity and Temperature</p> <ul style="list-style-type: none"> - Measure and record mass using grams and kilograms. - Measure and record volume and capacity using millilitres and litres. - Compare mass, volume and capacity using appropriate mathematical vocabulary. - Solve problems involving mass, volume and capacity using the four operations. | <p>Fractions</p> <ul style="list-style-type: none"> - Understand fractions as equal parts of a whole and identify equal and unequal parts. - Recognise, name and find fractions including halves, quarters and thirds of shapes, objects and quantities. - Recognise and use unit fractions and non-unit fractions, including finding the whole from a fraction. - Explore fraction equivalence and count in fractions up to one whole. <p>Time</p> <ul style="list-style-type: none"> - Tell and write the time to the hour, half hour, quarter hour and 5-minute intervals on an analogue clock. - Use the language of time, including past and to, when reading and describing times. - Understand relationships between units of time, including minutes in an hour and hours in a day. <p>Statistics</p> <ul style="list-style-type: none"> - Collect, organise and record data using tally charts and tables. - Represent data using block diagrams and pictograms. - Interpret and compare information presented in tables, block diagrams and pictograms. <p>Position and Direction</p> <ul style="list-style-type: none"> - Use positional and directional language to describe position, movement and turns. - Recognise and describe turns, including in different directions and amounts of rotation. - Create and continue shape patterns involving movement and turns. |
| Year 3 | <p>Place Value</p> <ul style="list-style-type: none"> - Represent and understand numbers to 1,000, including identifying hundreds, tens and ones and recognising the value of each digit - Partition numbers in different ways, including standard and flexible partitioning using place value knowledge - Use number lines effectively, including placing, estimating and interpreting numbers up to 1,000 - Compare, order and reason about numbers, using place value to explain and justify their thinking - Develop number sense through patterns and operations, including finding 1, 10 and 100 more or less and counting in steps of 50 <p>Addition and Subtraction</p> <ul style="list-style-type: none"> - Apply number bonds within 10 - Add and subtract 1s, 10s and 100s using place value understanding - Add and subtract across boundaries (crossing 10 and 100) including bridging through tens and hundreds - Identify and use patterns in addition and subtraction to support fluency and reasoning - Subtract 10s across 100 and make connections between place value patterns | <p>Multiplication and Division B</p> <ul style="list-style-type: none"> - Multiply and divide by multiples of 10 and use related calculations to support fluency - Reason about multiplication and division, recognising and using inverse relationships - Multiply 2-digit numbers by 1-digit numbers, including with and without exchange - Divide 2-digit numbers by 1-digit numbers using known facts, partitioning and flexible strategies, including remainders - Apply scaling in multiplication and division contexts - Solve problems in multiple ways, justifying methods and comparing approaches <p>Length and Perimeter</p> <ul style="list-style-type: none"> - Measure and compare length using standard units (mm, cm and m), including converting between units - Use equivalent lengths and relationships between millimetres, centimetres and metres to solve problems - Add and subtract lengths using appropriate units and strategies - Compare, estimate and order lengths in different units - Understand, measure and calculate perimeter of shapes - Apply perimeter knowledge to solve practical measurement problems | <p>Fractions B</p> <ul style="list-style-type: none"> - Understand and partition the whole when working with fractions - Find unit and non-unit fractions of sets of objects and quantities - Add and subtract fractions with the same denominator - Apply fractions of amounts to solve problems - Use reasoning to explain and justify fraction calculations in different contexts <p>Money</p> <ul style="list-style-type: none"> - Understand pounds and pence and their relationship in the British currency system - Convert between pounds and pence accurately - Add and subtract money using efficient calculation strategies - Solve problems involving finding change in real-life contexts <p>Time</p> <ul style="list-style-type: none"> - Understand Roman numerals to 12 and use them in context - Read, write and interpret time using analogue and digital clocks, including to the nearest minute and in 5-minute intervals - Use am and pm accurately to distinguish between morning and afternoon times - Understand and convert between units of time (seconds, minutes, hours, days, |

| | | | |
|---------------|---|---|--|
| | <ul style="list-style-type: none"> - Add and subtract two-digit and three-digit numbers using place value strategies - Add and subtract with no exchange (regrouping not required) - Add and subtract across 10 and 100, including when regrouping is required - Use known facts and patterns to support efficient mental and written calculation - Add and subtract 2-digit and 3-digit numbers using place value strategies, including formal and informal methods - Subtract a 2-digit number from a 3-digit number, applying efficient calculation strategies - Use complements to 100 to support mental calculation and number fluency - Estimate and check answers for reasonableness - Use inverse operations to check and solve calculations - Make informed decisions about the most efficient strategy to use when solving problems <p>Multiplication and Division A</p> <ul style="list-style-type: none"> - Understand multiplication and division as equal groups, sharing and grouping - Use arrays and concrete representations to model multiplication and division - Secure fluency in 2, 5 and 10 times tables and related multiples - Develop understanding of 3, 4 and 8 times tables, including multiplication and division facts - Recognise and use relationships between the 2, 4 and 8 times tables - Apply known multiplication and division facts to solve problems efficiently | <p>Fractions A</p> <ul style="list-style-type: none"> - Understand unit fractions and the meaning of denominators - Compare and order unit and non-unit fractions, including reasoning about numerators and size of the whole - Represent and interpret fractions on number lines and use them to count in fractional steps - Recognise and identify equivalent fractions using number lines and bar models - Apply fractions to scales and measurement contexts to support real-world understanding <p>Mass and Capacity</p> <ul style="list-style-type: none"> - Use scales to measure, compare and read mass accurately in grams and kilograms - Understand equivalent masses and convert between kilograms and grams - Add and subtract mass using appropriate units and calculation strategies - Measure, compare and calculate capacity and volume in millilitres and litres - Understand equivalence between litres and millilitres and use this to solve problems - Apply addition and subtraction to capacity and volume in practical contexts | <ul style="list-style-type: none"> - months and years) - Calculate durations using start and end times, including solving multi-step time problems - Apply time knowledge to solve real-life problems involving measurement and intervals <p>Shape</p> <ul style="list-style-type: none"> - Understand turns and angles, including recognising right angles - Compare, measure and accurately draw angles - Identify horizontal, vertical, parallel and perpendicular lines - Recognise, describe and classify 2-D shapes and draw polygons accurately - Recognise, describe and construct 3-D shapes - Understand and make connections between geometric properties to build and represent shapes in different ways <p>Statistics</p> <ul style="list-style-type: none"> - Collect, organise and represent data in a variety of formats - Draw and interpret pictograms and bar charts - Interpret and use bar charts to answer questions and solve problems - Use two-way tables to organise and compare data - Analyse data representations to draw conclusions and support reasoning |
| Year 4 | <p>Place Value</p> <ul style="list-style-type: none"> - Understand the part-whole model - Read, write, represent and interpret numbers to 10,000. - Understand and apply place value to partition and flexibly partition numbers to 10,000. - Find 1, 10, 100 and 1,000 more or less than a given number. - Use number lines to represent, estimate, compare and order numbers to 10,000. - Read and write Roman numerals. - Round numbers to the nearest 10, 100 and 1,000. <p>Addition and Subtraction</p> <ul style="list-style-type: none"> - Add and subtract 1s, 10s, 100s and 1,000s using place value knowledge. - Add and subtract up to two 4-digit numbers using formal written methods, including exchanging. - Select efficient mental and written calculation strategies to solve addition and subtraction problems. - Estimate and check answers using appropriate strategies. - Apply addition and subtraction skills to solve problems and reason mathematically. <p>Area</p> <ul style="list-style-type: none"> - Understand area as the amount of surface covered by a shape. - Measure and calculate area by counting squares. - Create and compare shapes with different areas. - Compare and reason about the area of shapes using appropriate mathematical language. <p>Multiplication and Division A</p> <ul style="list-style-type: none"> - Recall and use multiplication and division facts for the 3, 6, 7, 9, 11 and 12 times tables. - Multiply and divide numbers using known multiplication and division facts. - Understand and apply the relationships between multiplication and division. - Multiply by 0 and 1, and divide by 1 and the number itself. - Multiply three numbers and solve problems involving multiplication and division. | <p>Multiplication and Division B</p> <ul style="list-style-type: none"> - Identify and use factor pairs and related multiplication and division facts. - Multiply and divide whole numbers by 10 and 100. - Use informal and formal written methods to multiply and divide numbers by a 1-digit number. - Apply efficient strategies for multiplication and division calculations. - Solve problems involving multiplication, division and correspondence. <p>Length and Perimeter</p> <ul style="list-style-type: none"> - Measure, compare and convert lengths in kilometres and metres. - Understand and use equivalent lengths involving kilometres and metres. - Measure and calculate the perimeter of rectangles, rectilinear shapes and polygons. - Find missing lengths and use them to solve perimeter problems. - Apply knowledge of perimeter to solve reasoning and problem-solving tasks. <p>Fractions</p> <ul style="list-style-type: none"> - Understand, represent and compare mixed numbers and improper fractions. - Convert between mixed numbers and improper fractions. - Identify and generate equivalent fractions using models and number lines. - Compare and order fractions, including mixed numbers and improper fractions. - Add and subtract fractions and mixed numbers. - Apply fraction knowledge to solve reasoning and problem-solving tasks. <p>Decimals A</p> <ul style="list-style-type: none"> - Understand and represent tenths and hundredths as fractions and decimals. - Use place value charts and number lines to represent and compare decimals. - Recognise the relationship between fractions, decimals and place value. - Divide 1-digit and 2-digit numbers by 10 and 100. - Apply knowledge of decimal place value to solve reasoning and problem-solving tasks. | <p>Decimals B</p> <ul style="list-style-type: none"> - Understand and represent decimals as parts of a whole, including tenths and hundredths. - Partition and flexibly partition decimal numbers using place value understanding. - Compare and order decimal numbers. - Round decimal numbers to the nearest whole number. - Recognise and use common fractions (halves and quarters) as decimals. <p>Money</p> <ul style="list-style-type: none"> - Understand and use decimal notation to represent money. - Convert between pounds and pence. - Compare, estimate and order amounts of money. - Calculate with money using addition and subtraction. - Solve real-life problems involving money and apply reasoning skills. <p>Time</p> <ul style="list-style-type: none"> - Understand and use units of time, including years, months, weeks, days, hours, minutes and seconds. - Read, interpret and convert between analogue and digital time. - Convert between 12-hour and 24-hour clock formats. - Solve problems involving time, including duration and conversion. <p>Shape</p> <ul style="list-style-type: none"> - Understand angles as measures of turns and identify and compare angles. - Classify and describe 2D shapes, including triangles, quadrilaterals and other polygons. - Identify and use lines of symmetry in shapes. - Complete and create symmetric figures. <p>Statistics</p> <ul style="list-style-type: none"> - Interpret and present data in a range of charts, including using comparison, sum and difference. - Interpret, draw and analyse line graphs. - Describe and compare trends in data over time. <p>Position and Direction</p> <ul style="list-style-type: none"> - Use coordinates to describe position in all four quadrants. - Plot and interpret coordinates on a grid. - Draw and describe 2D shapes on a coordinate grid. - Understand and perform translations on a coordinate grid. - Describe the direction and magnitude of translations using precise mathematical language. |
| Year 5 | <p>Place Value</p> <ul style="list-style-type: none"> - Read, write, represent and interpret numbers up to 1,000,000, including Roman numerals to 1,000. - Understand place value in numbers up to 1,000,000, including powers of 10. - Partition and flexibly partition numbers up to 1,000,000. | <p>Multiplication and Division B</p> <ul style="list-style-type: none"> - Multiply whole numbers, including multiplying up to 4-digit numbers by 1-digit numbers and up to 4-digit numbers by 2-digit numbers. - Use a range of multiplication strategies, including area models and formal written methods. | <p>Shape</p> <ul style="list-style-type: none"> - Understand and use degrees to measure and describe angles. - Classify, estimate and measure angles, including up to 180°. - Draw and construct lines, angles and shapes accurately. - Calculate unknown angles on a straight line and around a point. |

| | | | |
|----------------------|--|---|--|
| | <ul style="list-style-type: none"> - Find 1, 10, 100, 1,000, 10,000 and 100,000 more or less than a given number. - Use number lines to estimate, compare and order numbers up to 1,000,000. - Compare, order and round numbers within 100,000 and 1,000,000. - Round numbers to the nearest 10, 100 and 1,000 using place value understanding. <p>Addition and Subtraction</p> <ul style="list-style-type: none"> - Use mental and written strategies to add and subtract whole numbers, including large numbers. - Apply efficient calculation strategies, including rounding to estimate and check answers. - Use inverse operations to check and solve addition and subtraction calculations. - Solve multi-step problems involving addition and subtraction. - Compare calculations and determine efficiency of methods. - Find missing numbers using inverse operations and problem-solving strategies. <p>Multiplication and Division A</p> <ul style="list-style-type: none"> - Identify and use multiples, factors and common multiples. - Recognise and use common factors, including in problem-solving contexts. - Understand and identify prime, square and cube numbers. - Apply knowledge of number properties to classify and reason about numbers. - Multiply and divide whole numbers by 10, 100 and 1,000, including understanding patterns in place value. <p>Fractions A</p> <ul style="list-style-type: none"> - Recognise, generate and use equivalent fractions, including unit and non-unit fractions. - Convert between improper fractions and mixed numbers. - Compare and order fractions, including those less than and greater than 1. - Add and subtract fractions and mixed numbers, including cases requiring regrouping. - Solve problems involving fractions, including reasoning about equivalence, comparison and calculation. | <ul style="list-style-type: none"> - Divide whole numbers, including 4-digit numbers by 1-digit numbers, including with remainders. - Use and apply short division and efficient division strategies. - Solve problems involving multiplication and division, including multi-step and reasoning problems. <p>Fractions B</p> <ul style="list-style-type: none"> - Multiply unit and non-unit fractions, including mixed numbers, by integers. - Use fractions as operators to calculate fractions of quantities and amounts. - Find fractions of amounts and use them to solve problems. - Work backwards to find the whole from a known fraction. - Apply fraction multiplication and scaling to solve reasoning and real-life problems. <p>Decimals and Percentages</p> <ul style="list-style-type: none"> - Understand and use decimal numbers up to three decimal places, including thousandths. - Recognise, represent and convert between fractions, decimals and percentages. - Compare, order and interpret decimals with up to three decimal places. - Round decimals to the nearest whole number and to one decimal place. - Understand percentages as part of 100 and link them to fractions and decimals. <p>Perimeter and Area</p> <ul style="list-style-type: none"> - Calculate the perimeter of rectangles, rectilinear shapes and polygons. - Understand and calculate the area of rectangles and compound shapes. - Estimate area and use appropriate strategies to check reasonableness of answers. - Apply perimeter and area knowledge to solve reasoning and problem-solving tasks. <p>Statistics</p> <ul style="list-style-type: none"> - Interpret and construct line graphs, tables and two-way tables. - Read, interpret and compare data presented in different tabular formats. - Use timetables to read and interpret time-based information and solve problems. - Analyse data to identify patterns, comparisons and relationships. | <ul style="list-style-type: none"> - Identify and describe properties of polygons, including regular and irregular shapes. - Recognise and describe 3D shapes and their properties. <p>Position and Direction</p> <ul style="list-style-type: none"> - Understand and use degrees to measure and describe angles. - Classify, estimate, measure and draw angles accurately, including up to 180°. - Calculate and reason about angles on a straight line and around a point. - Identify, describe and compare properties of 2D shapes, including regular and irregular polygons. - Recognise, describe and work with lines of symmetry and reflections in horizontal and vertical lines. - Recognise and describe properties of 3D shapes. <p>Decimals</p> <ul style="list-style-type: none"> - Add and subtract decimals, including across 1 and within the same or different numbers of decimal places. - Use known number facts and complements to 1 to support efficient decimal calculations. - Apply efficient mental and written strategies to add and subtract decimals, including problem solving. - Understand and extend decimal sequences and patterns. - Multiply and divide decimals by 10, 100 and 1,000, including finding missing values. <p>Negative Numbers</p> <ul style="list-style-type: none"> - Understand and use negative numbers in context. - Count forwards and backwards through zero in 1s and in multiples. - Compare and order positive and negative numbers. - Calculate intervals and find the difference between positive and negative numbers. <p>Converting Units</p> <ul style="list-style-type: none"> - Convert, compare and calculate with metric units of measure, including length, mass, capacity and time. - Understand and use equivalent units, including conversions between metric and imperial measures. - Solve problems involving units of measure in real-life contexts, including timetables. - Convert between units of time and use these to calculate durations and solve problems. <p>Volume</p> <ul style="list-style-type: none"> - Understand and use units of volume and capacity, including cubic centimetres. - Estimate and compare volume and capacity using appropriate strategies. - Solve problems involving volume and capacity in practical contexts. |
| <p>Year 6</p> | <p>Place Value</p> <ul style="list-style-type: none"> - Read, write, represent and interpret numbers up to 10,000,000. - Understand place value, including powers of 10, in numbers up to 10,000,000. - Use number lines to represent, compare and order numbers and integers. - Compare, order and round any integers, including large numbers. - Understand and use negative numbers in context. <p>Addition, Subtraction, Multiplication and Division</p> <ul style="list-style-type: none"> - Add and subtract integers, including working across zero. - Understand and apply number properties, including factors, multiples, primes, square and cube numbers, and divisibility rules. - Use knowledge of factors and multiples to support efficient calculation strategies. - Multiply whole numbers, including up to 4-digit numbers by 2-digit numbers, using efficient written methods. - Divide whole numbers using a range of strategies, including short and long division, with and without remainders. - Apply the order of operations in calculations. - Solve multi-step problems involving all four operations, using mental strategies and estimation to check reasonableness. <p>Fractions A</p> <ul style="list-style-type: none"> - Identify, generate and use equivalent fractions, including on number lines. - Simplify fractions using common factors. | <p>Ratio</p> <ul style="list-style-type: none"> - Understand and use ratio language and notation to describe relationships between quantities. - Express ratios in different forms, including fractions. - Solve problems involving ratio and proportion in a range of contexts. - Use scale factors and interpret scale drawings. - Recognise and work with similar shapes. - Apply ratio and proportion to real-life contexts, including recipes and scaling problems. <p>Algebra</p> <ul style="list-style-type: none"> - Use and interpret function machines to represent rules and relationships. - Form and substitute into expressions, including simple formulae. - Form and solve equations, including one-step and two-step equations. - Find pairs of values and explore relationships between two variables. - Solve problems involving two unknowns, using algebraic reasoning. <p>Decimals</p> <ul style="list-style-type: none"> - Understand place value, including integers and decimals, and use this to compare and order numbers. - Round decimals appropriately to support calculation and estimation. - Add, subtract, multiply and divide decimals, including by integers. | <p>Shape</p> <ul style="list-style-type: none"> - Understand and use angles, including measuring, classifying and calculating unknown angles. - Apply angle facts, including vertically opposite angles and angles on a straight line. - Calculate angles in triangles, quadrilaterals and polygons, including special cases and missing angles. - Recognise and describe properties of circles. - Draw and construct shapes accurately using mathematical tools. - Identify and interpret nets of 3D shapes and relate them to solid shapes. <p>Position and Direction</p> <ul style="list-style-type: none"> - Understand and use coordinates in the first quadrant and across all four quadrants. - Read, plot and interpret coordinates on a coordinate grid. - Solve problems involving coordinates in different contexts. - Describe and perform translations on a coordinate grid. - Understand and carry out reflections in horizontal and vertical lines. |

| | | | |
|--|--|--|--|
| | <ul style="list-style-type: none"> - Compare and order fractions using common denominators and numerators. - Add and subtract fractions, including mixed numbers, with increasing complexity. - Solve problems involving fractions, including reasoning and calculation. <p>Fractions B</p> <ul style="list-style-type: none"> - Multiply and divide fractions, including multiplying fractions by integers and by fractions, and dividing fractions by integers. - Calculate fractions of amounts and use these to solve problems. - Work backwards to find the whole from a known fraction of an amount. - Apply fraction operations in mixed and multi-step problems. <p>Converting Units</p> <ul style="list-style-type: none"> - Convert, compare and calculate with metric units of measure, including length, mass, capacity and time. - Understand and use metric conversions and apply them to solve problems. - Use and apply knowledge of miles and kilometres, including comparisons and conversions. - Recognise and use imperial units alongside metric measures in context. - Solve problems involving measurement in real-life contexts. | <ul style="list-style-type: none"> - Multiply and divide numbers by 10, 100 and 1,000, including decimal numbers. - Use understanding of fractions, decimals and percentages interchangeably to solve problems. - Apply decimal and percentage knowledge in real-life and contextual problem solving. <p>Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> - Understand and use equivalence between fractions, decimals and percentages. - Interpret fractions as division and use this to support conversions. - Compare and order fractions, decimals and percentages. - Calculate percentages of amounts, including one-step and multi-step problems. - Solve problems involving missing values using fraction, decimal and percentage relationships. <p>Area, Perimeter and Volume</p> <ul style="list-style-type: none"> - Understand and compare area and perimeter, including shapes with the same area. - Calculate the area of triangles, including right-angled and general triangles. - Calculate the area of parallelograms. - Understand and calculate volume, including counting cubes and using formulae for cuboids. - Apply knowledge of area and volume to solve reasoning and problem-solving problems. <p>Statistics</p> <ul style="list-style-type: none"> - Interpret and construct a range of statistical representations, including line graphs, dual bar charts and pie charts. - Read, interpret and compare data, including pie charts expressed as fractions and percentages. - Draw and present data accurately in graphical form. - Understand and calculate the mean as an average. - Analyse data to identify patterns, comparisons and relationships. | |
|--|--|--|--|