

Maths Overview

	Autumn Term	Spring Term	Summer Term
EYFS	Match, sort and compare Talk about measures and patterns It's me 1, 2, 3 Circles and triangles 1, 2, 3, 4, 5 Shapes with 4 sides	Alive in 5 Mass and capacity Growing 6, 7, 8 Length, height and time Building 9 and 10 Explore 3D shapes	To 20 and beyond How many now? Manipulate, compose and decompose Sharing and grouping Visualise, build and map Make connections
Year 1	Place Value (within 10) Addition and Subtraction (within 10) Shape	Place Value (within 20) Addition and Subtraction (within 20) Place Value (within 50) Length and Height Mass and Volume	Multiplication and Division Fractions Position and Direction Place Value (within 100) Money Time
Year 2	Place Value Addition and Subtraction Shape	Money Multiplication and Division Length and Height Mass, Capacity and Temperature	Fractions Time Statistics Position and Direction
Year 3	Place Value Addition and Subtraction Multiplication and Division A	Multiplication and Division B Length and Perimeter Fractions A Mass and Capacity	Fractions B Money Time Shape Statistics
Year 4	Place Value Addition and Subtraction Area Multiplication and Division A	Multiplication and Division B Length and Perimeter Fractions Decimals A	Decimals B Money Time Shape Statistics Position and Direction
Year 5	Place Value Addition and Subtraction Multiplication and Division A Fractions A	Multiplication and Division B Fractions B Decimals and Percentages Perimeter and Area Statistics	Shape Position and Direction Decimals Negative Numbers Converting Units Volume
Year 6	Place Value Addition, Subtraction, Multiplication and Division Fractions A Fractions B Converting Units	Ratio Algebra Decimals Fractions, Decimals and Percentages Area, Perimeter and Volume Statistics	Shape Position and Direction Themed Projects, Consolidation and Problem Solving

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
EYFS	<p>Match, sort and compare</p> <ul style="list-style-type: none"> Sort objects Describe a set, saying which set has 'more' Match objects and pictures <p>Talk about measures and patterns</p> <ul style="list-style-type: none"> Identify similarities in a set Describe the size of an object, using big, small, little and large Use other simple language to describe mass and capacity Recognise, continue and create a simple repeating pattern e.g. ABABAB <p>It's me 1, 2, 3</p> <ul style="list-style-type: none"> Explore and making numbers up to 3 <p>Circles and triangles</p> <ul style="list-style-type: none"> Identify circles and triangles Use mathematical language to describe the properties of circles and triangles, such as sides, straight, corners and round Recognise and describe shapes even if the orientation or the size is different. Explore positional language: on, under, above, below, next to, behind, and in front of <p>1, 2, 3, 4, 5</p> <ul style="list-style-type: none"> Different representations of 4 and 5 Subitise 4 and 5. Represent 4 and 5 Fine 1 more/1 less Composition of numbers 1-5 <p>Shapes with 4 sides</p> <ul style="list-style-type: none"> Identify and name shapes with 4 sides Combine shapes with 4 sides 	<p>Alive in 5</p> <ul style="list-style-type: none"> Exploring zero Sorting zero and not zero Find numbers 0 – 5 Subitise 0 – 5 Represent numbers 0 – 5 Composition of numbers 0 – 5 <p>Mass and capacity</p> <ul style="list-style-type: none"> Explore heavier and lighter using balances Explore and compare capacity and use the language of capacity: full, empty, nearly full and nearly empty. <p>Growing 6, 7, 8</p> <ul style="list-style-type: none"> Composition of numbers 6, 7 & 8 Find and make doubles to 8 Make a whole from 2 parts <p>Length, height and time</p> <ul style="list-style-type: none"> Explore and compare height Explore and compare length Discuss what is happening tomorrow, next week or at the weekend <p>Building 9 and 10</p> <ul style="list-style-type: none"> Build 9 and 10 using manipulatives Conceptual subitising to 10 Number bonds to 10 Doubles to 10 <p>Explore 3D shapes</p> <ul style="list-style-type: none"> Recognise and name 3D shapes Explore 3D shapes using real life objects 	<p>To 20 and beyond</p> <ul style="list-style-type: none"> Count to 20 and beyond Build numbers 10-20 Recognise counting patterns <p>How many now?</p> <ul style="list-style-type: none"> Add more by combining two groups Take away by taking objects away from a group <p>Manipulate, compose and decompose</p> <ul style="list-style-type: none"> Rotate and manipulate shapes Use squares and triangles to make new shapes Copy and compare shape pictures, recognising similarities and differences Find 2D shapes within 3D shapes. <p>Sharing and grouping</p> <ul style="list-style-type: none"> Explore sharing by sharing objects equally Exploring grouping Know that quantities can be distributed equally Play with and build doubles to 10 Know and recall double facts. <p>Visualise, build and map</p> <ul style="list-style-type: none"> Create and explore pattern rules Describes positions and viewpoints Represent maps with models <p>Make connections</p> <ul style="list-style-type: none"> Composition of all numbers to 10, including the number symbol and cardinal value. Automatically recall number bonds using numbers 0-5 and some to 10.

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Year 1

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
Year 1	<p>Place Value (within 10)</p> <ul style="list-style-type: none"> Sort, count and represent objects Recognise numbers as words Find one more and one less within 10 Count backwards within 10 <p>Addition and Subtraction (within 10)</p> <ul style="list-style-type: none"> Use part-whole models to represent that wholes can be composed of two or more parts Write number sentences Use + and = to write number sentences Understand that addition is commutative Learn number bonds within and to 10 Understand the concepts of 'addition' and 'subtraction' <p>Shape</p> <ul style="list-style-type: none"> Recognise and name 3D shapes Sort 3D shapes Recognise and name 2D shapes Sort 2D shapes 	<p>Place Value (within 20)</p> <ul style="list-style-type: none"> Count within 20 Understand and represent numbers to 20 with concrete resources of pictorially Find one more and one less within 20 Compare and order numbers to 20 <p>Addition and Subtraction (within 20)</p> <ul style="list-style-type: none"> Add by counting on Add by using doubles and near doubles Subtract by counting back and finding the difference Solve missing number problems <p>Place Value (within 50)</p> <ul style="list-style-type: none"> Count within 50 Partition numbers with 50 Find one more and one less within 50 <p>Length and Height</p> <ul style="list-style-type: none"> Compare lengths and heights Measure length using non-standard units Measure lengths in centimetres <p>Mass and Volume</p> <ul style="list-style-type: none"> Measure and compare mass Measure and compare volume Measure and compare capacity 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> Count in 2s, 5s and 10s Recognise equal groups Use grouping and sharing to make equal groups Using arrays <p>Fractions</p> <ul style="list-style-type: none"> Recognise and find half of an object, shape or quantity Recognise and find a quarter of an object, shape or quantity <p>Position and Direction</p> <ul style="list-style-type: none"> Describe full, half, quarter and three-quarter turns Describe position using the terms left, right, forwards, backwards, above and below Begin to use ordinal numbers <p>Place Value (within 100)</p> <ul style="list-style-type: none"> Count within 100 Partition numbers within 100 Find one more and one less within 100 Compare any two numbers within 100 <p>Money</p> <ul style="list-style-type: none"> Recognise the value of coins and notes Count using coins <p>Time</p> <ul style="list-style-type: none"> Know the days of the week and months of the year Tell the time to the hour Tell the time to the half hour

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Year 2

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
Year 2	<p>Place Value</p> <ul style="list-style-type: none"> ○ Represent the place value of each digit in numbers to 100 ○ Represent numbers to 100 using different representations ○ Write numbers to 100 in numerals and words ○ Use < > and = to compare and order numbers to 100 ○ Count in 2s, 3 and 5s from 0 ○ Count in 10s from any number, forward and backwards <p>Addition and Subtraction</p> <ul style="list-style-type: none"> ○ Know and use addition and subtraction bonds within 20 ○ Know bonds to 100 (tens) ○ Add and subtract using concrete resources, pictorial representations, and mental strategies: <ul style="list-style-type: none"> ➢ A 2-digit number and ones ➢ A 2-digit number and tens ➢ Two 2-digit numbers ➢ Three 1-digit numbers ○ Demonstrate that addition is commutative and subtraction is not ○ Begin using the inverse to check calculations <p>Shape</p> <ul style="list-style-type: none"> ○ Recognise, compare and sort a growing number of 2D and 3D shapes ○ Identify the properties of shapes, including sides and vertices (2D), and faces, edges and vertices (3D) ○ Identify lines of symmetry on shapes 	<p>Money</p> <ul style="list-style-type: none"> ○ Using coins and notes to count in £ and p ○ Make the same amount of money using different combinations of amounts ○ Solve problems involving money <p>Multiplication and Division</p> <ul style="list-style-type: none"> ○ Use the multiplication and division symbols correctly in number sentences ○ Use knowledge of doubling and halving to multiply and divide by 2 ○ Recognise if a number is odd or even ○ Know the 2, 5 and 10 x table, with related division facts ○ Demonstrate that multiplication is commutative and division is not <p>Length and Height</p> <ul style="list-style-type: none"> ○ Measure accurately in centimetres and metres ○ Compare and order lengths and heights ○ Solve problems involving all four operations with lengths and heights <p>Mass, Capacity and Temperature</p> <ul style="list-style-type: none"> ○ Measure mass accurately in grams and kilograms ○ Measure capacity accurately in millilitres and litres ○ Measure temperature accurately in degrees celcius 	<p>Fractions</p> <ul style="list-style-type: none"> ○ Recognise, find, name and write the fractions $1/2$, $1/3$, $1/4$, $2/4$ and $3/4$ of a length, shape, set of objects or quantity ○ Understand what unit fractions and non-unit fractions are ○ Count in fractions up to a whole ○ Know and demonstrate that $2/4 = 1/2$ <p>Time</p> <ul style="list-style-type: none"> ○ Recognise quarter past and quarter to on a clock ○ Tell the time to 5 minutes, past the hour and to the hour ○ Know the number of minutes in an hour ○ Know the number of hours in a day <p>Statistics</p> <ul style="list-style-type: none"> ○ Present data in tally charts, tables, block diagrams and pictograms ○ Ask and answer questions about data <p>Position and Direction</p> <ul style="list-style-type: none"> ○ Use directional language including up, down, left and right ○ Use the terms 'quarter turn, half turn, three quarter turn and full turn', including the terms 'clockwise and counter-clockwise' ○ Present shapes and objects in patterns using turns

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Year 3

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
Year 3	<p>Place Value</p> <ul style="list-style-type: none"> ○ Represent the place value of digits in numbers to 1000 ○ Find 1, 10 or 100 more or less of numbers up to 1000 ○ Compare and order numbers to 1000 ○ Count in 50s, using their knowledge of counting in 5s <p>Addition and Subtraction</p> <ul style="list-style-type: none"> ○ Develop mental addition skills to add and subtract: <ul style="list-style-type: none"> ➢ A 3-digit number and 1s ➢ A 3-digit number and 10s ➢ A 3-digit number and 100s ○ Use column addition and column subtraction, including with exchanging, for 3-digit numbers ○ Apply knowledge of number bonds to make complements to 100 ○ Use the inverse operation and estimations to check answers to calculations <p>Multiplication and Division A</p> <ul style="list-style-type: none"> ○ Learn the 3, 4 and 8 x tables and the related division facts 	<p>Multiplication and Division B</p> <ul style="list-style-type: none"> ○ Multiply a 2-digit number by a 1-digit number, including with exchanging, using concrete and pictorial representations ○ Divide a 2-digit number by a 1-digit number, including with remainders, using concrete and pictorial representations <p>Length and Perimeter</p> <ul style="list-style-type: none"> ○ Measure accurately in millimetres ○ Understand equivalences between mm and cm, and cm and m ○ Compare lengths ○ Measure and calculate the perimeter of shapes <p>Fractions A</p> <ul style="list-style-type: none"> ○ Understand what the denominator and numerator represent in unit and non-unit fractions ○ Understand how fractions make up part of a whole, and how to make a whole ○ Count in fractions using a number line ○ Represent equivalent fractions using different representations <p>Mass and Capacity</p> <ul style="list-style-type: none"> ○ Understand the equivalence between grams and kilograms ○ Measure, compare, add and subtract mass, in grams and kilograms ○ Understand the equivalence between litres and millilitres ○ Measure, compare, add and subtract capacity (and volume) in litres and millilitres 	<p>Fractions B</p> <ul style="list-style-type: none"> ○ Add and subtract unit and non-unit fractions where the denominator is the same ○ Find fractions of a discrete set of objects: unit and non-unit fractions <p>Money</p> <ul style="list-style-type: none"> ○ Covert pounds and pence ○ Add and subtract amounts of money, using both £ and p ○ Find change when calculating with money, using both £ and p <p>Time</p> <ul style="list-style-type: none"> ○ Read and write Roman numerals to 12 ○ Tell the time to the minute from an analogue clock ○ Read time on a digital clock ○ Use am and pm to tell the time ○ Know the number of seconds in a minute, the number of days in each month, and the days in a year and leap year ○ Calculate and compare the time taken for tasks <p>Shape</p> <ul style="list-style-type: none"> ○ Identify right angles and know how many right angles it takes to make turns ○ Identify horizontal and vertical lines ○ Identify parallel and perpendicular lines ○ Draw 2D shapes and make 3D shapes <p>Statistics</p> <ul style="list-style-type: none"> ○ Present and interpret data in bar charts, pictograms and tables

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Year 4

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
Year 4	<p>Place Value</p> <ul style="list-style-type: none"> Read and write numbers to 10000 Represent the place value of digits in numbers to 10000 Find 1, 10, 100 or 1000 more or less than numbers up to 10000 Compare and order numbers to 10000 Round numbers to the nearest 10, 100 or 1000 Count backwards through zero Read and write Roman numerals to 100 <p>Addition and Subtraction</p> <ul style="list-style-type: none"> Use column addition and column subtraction, including with exchanging, for 4-digit numbers Use the inverse operation and estimations to check answers to calculations <p>Area</p> <ul style="list-style-type: none"> Measure and compare areas of shapes by counting squares <p>Multiplication and Division A</p> <ul style="list-style-type: none"> Learn the 6, 7, 9, 11 and 12 x tables and the related division facts Multiply numbers by 0 and 1 accurately Divide numbers by 1 accurately Multiply three numbers, understanding this can be done commutatively and making educated choices as to the order based on this 	<p>Multiplication and Division B</p> <ul style="list-style-type: none"> Recognise and use factor pairs Multiply 2- and 3- digit numbers by a 1-digit number using short multiplication Divide 3-digit numbers using concrete and pictorial representations <p>Length and Perimeter</p> <ul style="list-style-type: none"> Convert between units of measurement for length accurately Calculate the perimeter of rectilinear shapes, including rectangles Find the length of missing sides on rectilinear shapes <p>Fractions</p> <ul style="list-style-type: none"> Partition, compare and order mixed numbers Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers Add and subtract mixed numbers and fractions with the same denominator Identify equivalent fractions using concrete and pictorial representations <p>Decimals A</p> <ul style="list-style-type: none"> Write tenths as decimals and fractions Write hundredths as decimals and fractions Divide 1- and 2-digit numbers by 10 and 100 	<p>Decimals B</p> <ul style="list-style-type: none"> Make complements to 1 using tenths and hundredths Compare and order decimal numbers Round decimal numbers to the nearest whole Write halves and quarters as decimals <p>Money</p> <ul style="list-style-type: none"> Write money in £ and p, using decimals Compare and estimate amounts of money Calculate with money, including decimals <p>Time</p> <ul style="list-style-type: none"> Make conversions between: hours and minutes; minutes and seconds; years and months; weeks and days. Convert between analogue and digital time Convert to and from the 24-hour clock <p>Shape</p> <ul style="list-style-type: none"> Compare and classify shapes based on their properties Identify if angles are acute or obtuse Compare and order angles Identify lines of symmetry in 2D shapes <p>Statistics</p> <ul style="list-style-type: none"> Present discrete and continuous data using appropriate graphs Present and interpret data on bar charts, pictograms, tables and other graphs <p>Position and Direction</p> <ul style="list-style-type: none"> Plot co-ordinates in the first quadrant Translate shapes left, right, up and down on a grid in the first quadrant

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Year 5

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
Year 5	<p>Place Value</p> <ul style="list-style-type: none"> Read and write numbers to 1,000,000 Compare and order numbers to 1,000,000 Represent the place value of digits in numbers to 1,000,000 Count forwards or backwards in steps of powers of 10 Round numbers to the nearest 10, 100 or 1000 Read and write Roman numerals to 1000 <p>Addition and Subtraction</p> <ul style="list-style-type: none"> Add and subtract numbers with more than 4-digits using column addition and subtraction Develop mental addition and subtraction strategies Use rounding and the inverse to check answers to calculations <p>Multiplication and Division A</p> <ul style="list-style-type: none"> Identify factors and multiples of given numbers Identify if a number is prime or composite Identify common factors of two numbers Recognise and use squared and cubed numbers Multiply and divide by 10, 100 and 1000 <p>Fractions A</p> <ul style="list-style-type: none"> Use knowledge of multiples to find equivalent fractions Convert between mixed numbers and improper fractions Compare and order fractions whose denominators have common multiples Add and subtract fractions whose denominators have common multiples 	<p>Multiplication and Division B</p> <ul style="list-style-type: none"> Use short multiplication to multiply numbers by 1-digit numbers Use long multiplication to multiply numbers by 2-digit numbers Use short division to divide numbers by a 1-digit number, identifying remainders where appropriate <p>Fractions B</p> <ul style="list-style-type: none"> Multiply fractions by whole numbers Multiply mixed numbers by whole numbers Calculate a fraction of an amount <p>Decimals and Percentages</p> <ul style="list-style-type: none"> Recognise and write fractions as decimals up to two decimal places Recognise and write thousandths as fractions and decimals Order and compare decimal numbers Round numbers to the nearest whole or one decimal place Convert between fractions, decimals and percentages <p>Perimeter and Area</p> <ul style="list-style-type: none"> Calculate the perimeter of polygons Calculate the area of rectangles and compound shapes <p>Statistics</p> <ul style="list-style-type: none"> Present and interpret data on line graphs Present and interpret data in two-way tables Read and interpret timetables 	<p>Shape</p> <ul style="list-style-type: none"> Estimate and compare angles of all sizes Draw and measure angles accurately in degrees Know that angles at a point and one whole turn equal 360 degrees Know that angles on a straight line and one half turn equal 180 degrees Recognise 3D shapes and their 2D faces Understand how regular and irregular polygons differ <p>Position and Direction</p> <ul style="list-style-type: none"> Translate shapes on a grid, including with co-ordinates Reflect shapes in horizontal and vertical lines <p>Decimals</p> <ul style="list-style-type: none"> Add and subtract decimals, including numbers with different decimal places Multiply and divide decimals by 10, 100 and 1000 <p>Negative Numbers</p> <ul style="list-style-type: none"> Count through zero forwards and backwards in ones and multiples of numbers Compare and order negative numbers <p>Converting Units</p> <ul style="list-style-type: none"> Convert accurately between units of length and time Convert between metric and imperial units <p>Volume</p> <ul style="list-style-type: none"> Estimate and compare volume and capacity using cubic centimetres

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.

Year 6

Fluency, Reasoning and Problem Solving run throughout the whole mathematics curriculum

	Autumn Term	Spring Term	Summer Term
Year 6	<p>Place Value</p> <ul style="list-style-type: none"> Read and write numbers to 10,000,000 Order and compare numbers to 10,000,000 Represent the place value of digits in numbers to 10,000,000 Round any number accurately Calculate intervals across zero <p>Addition, Subtraction, Multiplication and Division</p> <ul style="list-style-type: none"> Identify common factors and multiples Identify prime numbers to 100 Identify squared and cubed numbers Use long multiplication to multiply 4-digit numbers by 2-digit numbers Use long division to multiply up to 4-digit numbers by 2-digits, expressing remainders as appropriate Know the order of operations <p>Fractions A</p> <ul style="list-style-type: none"> Compare and order fractions and mixed numbers whose denominators are not multiples of each other Add and subtract any fractions Add and subtract any mixed numbers <p>Fractions B</p> <ul style="list-style-type: none"> Multiply pairs of fractions Divide fractions by whole numbers <p>Converting Units</p> <ul style="list-style-type: none"> Convert metric units of length, mass and volume, using decimal notation Measure and convert imperial units of measure 	<p>Ratio</p> <ul style="list-style-type: none"> Understand ratio as a relationship between two amounts Use ratio to complete scaled drawings accurately Use the language of scale factors to reduce or enlarge shapes <p>Algebra</p> <ul style="list-style-type: none"> Solve problems involving function machines Form expressions and use substitution to find the value of expressions Use simple formulae to solve problems Find pairs of values that satisfy equations with two unknowns <p>Decimals</p> <ul style="list-style-type: none"> Round decimals accurately Multiply and divide decimals by whole numbers <p>Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> Understand fractions as divisions Find equivalent fractions, decimals and percentages Calculate percentages of amounts <p>Area, Perimeter and Volume</p> <ul style="list-style-type: none"> Calculate the area of triangles Calculate the area of parallelograms Calculate the volume of a cuboid <p>Statistics</p> <ul style="list-style-type: none"> Present and interpret data on pie charts Calculate the mean of a set of numbers 	<p>Shape</p> <ul style="list-style-type: none"> Compare and classify shapes based upon their properties Calculate angles at a point, on a straight line, and when vertically opposite, finding missing angles Find unknown angles in triangles, quadrilaterals, and other polygons Measure and draw 2D shapes accurately Know the properties of circles, including radius, diameter and circumference Make nets of 3D shapes <p>Position and Direction</p> <ul style="list-style-type: none"> Read and plot co-ordinates in all four quadrants Reflect and translate shapes on the full co-ordinate plane <p>Themed Projects, Consolidation and Problem Solving</p> <ul style="list-style-type: none"> Throughout the final term at school, children will apply their learning to realistic contexts, including cookery, calculating profit and loss, climate, budgeting, bills and mortgages. Children not working at the Expected Standard will continue developing their knowledge and skills in preparation for the transition to secondary school

Using professional judgement, teachers may alter the sequence of learning, where there is no impact upon the progression of knowledge and skills.