Maths Whole School Overview 2023-24

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	**Number:** Recite some number names in sequence and use some number names and number language spontaneously. Use some number names accurately in play and show curiosity about numbers by offering comments or asking questions. Select a small number of objects from a group when asked. Shows an interest in numerals in the environment. **Space, Shape & Measure**: Notice simple shapes and patterns in pictures. Begin to use the language of size.		**Number:** Use some number names and number language spontaneously. Know that numbers identify how many objects are in a set. Show curiosity about numbers by offering comments or asking questions. Begin to represent numbers using fingers, marks on paper or pictures. **Space, Shape & Measure**: Use positional language. Show interest in shape by sustained construction activity or by talking about shapes or arrangements		**Number:** Show a curiosity about numbers and show an interest in number problems. Realise that not only objects, but anything can be counted, including steps, claps or jumps. Recognise numbers of personal significance. Count objects to 10, and beginning to count beyond 10. Begin to add and take away. **Space, Shape & Measure**: Begin to use mathematical names for solid 3D shapes and flat 2D shapes. Describe their relative position such as 'behind', 'next to' and 'under'. Begin to use everyday language related to time and money.	
Reception	**Number:** Recognise numerals 1 to 5. Select the correct numeral to represent 1 to 5, then 1 to 10 objects. Shows an interest in representing numbers. Count, estimate and compare numbers to 10. Calculate simple addition problems. **Space, Shape & Measure**: Use shapes appropriately for tasks. Shows and interest in shape and space by playing with shapes or making arrangements with objects and select a particular named shape.		**Number:** Use developing mathematical ideas and methods to solve practical problems. Begin to read, write and count beyond 10 and order number. Add two amounts together by finding the total number of items in two groups. Make sensible estimations of an amount and check by counting accurately. Use ordinal numbers in different contexts. Subtract simple numbers as well as problem solve. **Space, Shape & Measure**: Order two or three items by length or height. Use familiar objects and common shapes to create and recreate patterns and build models. Looking at and talking about the properties of 2d and 3d shapes. Begin to use non-standard measures when looking at height, weight and length.		**Number:** Count reliably with numbers from 1 to 20, place them in order. 1 more and 1 less. Use quantities and objects, to add and subtract two single-digit numbers and count on or back to find the answer. Solve problems, including doubling, halving and sharing. **Space, Shape & Measure**: Use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. Recognise, create and describe patterns. Explore characteristics of everyday objects and shapes and use mathematical language to describe them.	
Books	Ten Little Princesses -Mike Brownlow Ten Little Elves – Mike Brownlow Counting – First Maths		Pete the Cat My Button's Story Six feet long and three feet wide – Jeannie Billington		Taking away with tigers Multiples with meercats	
Year 1	**Number and the number system:** Read and write numbers from 1 to 20 in numerals. Count to 100, forwards and backwards. Identify one more and one less. Identify and represent numbers using objects and pictorial representations. Comparing numbers: equal to, more than, less than (fewer), most, least. Ordinal numbers, i.e. first, second, third. Odd and even numbers. **Addition and subtraction:** Add and subtract numbers practically. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve problems practically. Represent, memorise and use number bonds and related subtraction facts within 10. **Multiplication and division:** Count in multiples of twos and tens. **Geometry:** Recognise and name 2D and 3D shapes and their properties. **Measurement:** Recognise and know the value of different denominations of coins and notes.		**Number and the number system:** Read and write numbers from 1 to 20 in numerals and words. Count to 100, forwards and backwards. Identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line. Comparing numbers: equal to, more than, less than (fewer), most, least. Place Value in numbers beyond 20 and ordering numbers. **Addition and subtraction:** Add and subtract numbers practically. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent, memorise and use number bonds and related subtraction facts within 20. Begin to know doubles. Solve simple one-step problems that involve addition and subtraction **Multiplication and division:** Count in multiples of twos, fives and tens. Double and halve numbers to 20. **Geometry:** Position, directions and movements, including half turns, in a clockwise direction **Measurement:** Lengths and heights, capacity and volume, using direct comparison. Use non-standard measures to measure. Sequence events in chronological order. Language relating to passing of time – days and months. Tell the time to the hour and half past the hour		**Number and the number system:** Read and write numbers from 1 to 20 in numerals and words. Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number e.g. 19, 18, 17, 16, … Identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line and use the language of: equal to, more than, less than (fewer), most, least. Place Value in numbers to 100 and ordering numbers. **Addition and subtraction:** Add and subtract numbers practically.Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent, memorise and use number bonds and related subtraction facts within 20. Begin to know doubles. Solve simple one-step problems (in familiar practical contexts, including using quantities) that involve addition and subtraction **Multiplication and division:** Count in multiples of twos, fives and tens. Solve one-step problems involving multiplication and division **Geometry:** Positions, directions and movements using language **Measurement:** Compare, describe and solve practical problems for mass or weight. Use non-standard measures to measure and begin to record lengths and height capacity and volume. Begin to use measuring tools (ruler, weighing scales, containers) and standard units to measure.	

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Year 2	**Number:** Read and write numbers in numerals and words, represent numbers in different ways (e.g. plotting number lines or using dienes, Lego, ten frame). **Place Value**: Compare and order numbers to 100, recognising the value of each digit in a 2-digit number. **Addition & Subtraction:** Number bonds to 20 and 100, addition of 3 one-digit numbers. **Multiplication & Division:** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Begin counting in 3s. **Geometry:** Recognise and name common 2-D and 3-D shapes.	**Fractions:** Recognise, find and name ½ and ¼ of a shape, set of objects or quantity. **Addition & Subtraction:** Add and subtract numbers using concrete objects, pictorial representations, and mentally (up to 100), recognising commutativity of addition. **Measures (Money):** Recognise British coins, including symbols (£ and p), combine coins to make a total. **Measures (Time):** Tell and write the time to five minutes, including quarter past/to the hour. **Statistics:** Interpret and construct simple pictograms, tally charts, block diagrams and tables. **Multiplication & Division:** Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.	**Fractions:** Recognise the equivalence of ½ and 2/4. **Geometry (Position and Direction):** Describe position, direction and movement, including whole, half, quarter and three-quarter turns. **Geometry (Shape):** Sort common 2D and 3D shapes according to their features. **Addition & Subtraction:** Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. **Multiplication & Division:** Solve one-step problems involving multiplication and division. **Measures:** Measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit.
Year 3	**Number and Place Value**. Ordering and comparing 3 and 4 digit numbers. Find 1, 10, 100 more. **Addition and subtraction**. Adding and subtracting using a number line. Partition numbers before subtracting and adding. Number bonds to 10, 20, 50 and 100. **Multiplication and Division** Using arrays for *multiplication*. Grouping in to equal groups. Sharing equally. Multiplication by 3,4 and 5.	**Fractions**. Understand the relation between unit fractions as operators (fractions of), and division by integers e.g. to find $\frac{1}{3}$, you divide by 3; to find $\frac{1}{5}$, you divide by 5 **Measurement** Measure, compare, add and subtract: length (m/cm/mm) **Geometry** Using arrays for *multiplication*. Grouping in to equal groups. Sharing equally. Multiplication by 3,4 and 5.	**Money** Adding pounds and pence mentally. Addition and subtraction of money with a number line. Adding money using expanded method. **Statistics & Data** Tally charts, bar graphs and pictograms. Collecting data.
Year 4	**Number and Place Value:** Order and compare numbers up to 4 digits **Addition and subtraction:** Use mental and written methods to add and subtract numbers with up to 4 digits. Solve 2 step problems **Multiplication and division:** Multiply numbers up to 3 digits by a 1 or 2 digit number using a formal written methods	**Fractions:** Identify equivalent fractions, decimal equivalent and calculate fractions of amounts. **Measurement:** Convert between metric units km to m, kg to g **Geometry:** Compare & classify geometric shapes and identify lines of symmetry	**Number and Place Value**: Order and compare numbers up to 4 digits- including negative numbers **Addition and Subtraction:** Use mental and written methods to add and subtract numbers with up to 4 digits. Solve 2 step problems **Multiplication and division:** Multiply and Divide 3 digit numbers by a 1 digit number by formal written methods using factor pairs
Year 5	**Place Value:** Order and compare numbers up to 7 digits- including decimal numbers. **Addition:** Add and subtract whole numbers with more than 4 digits, including using formal written methods. **Multiplication and division:** Multiply numbers up to 4 digits by a 1 or 2 digit number using a formal written methods and identify multiples, factors & prime numbers. **Fractions:** Convert mixed numbers and improper fractions & decimals into fractions.	**Number and Place Value**: Negative numbers, power of 10 and linear sequences **Addition and Subtraction:** Add and subtract numbers mentally with increasingly large numbers & multistep problems. **Multiplication and division:** Divide 4 digit numbers by a 1 digit number using formal written methods & squared/ cubed numbers. **Fractions:** Convert fractions into decimals/ percentages & find fractions of quantities including weight and money.	**Number and Place Value**: Read Roman numerals to 1000. **Addition and Subtraction:** Use number sentences to create number stories. **Multiplication and division:** Solve larger number problems by decomposing them into their factors & answer problems that use scaling. **Fractions:** Identify equivalent fractions up to thousandths & multiply mixed and proper fractions by whole numbers. **Measurement:** Use equivalences between metric and imperial and calculate the area of scaled drawings.

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	Measurement: Convert between metric and imperial units of measure. **Geometry:** compare & measure angles	**Measurement:** Perimeter and area of a compound shape & triangles and convert units of time. **Geometry:** Investigate coordinates, reflection and translation. **Statistics:** Read and interpret timetables & line graphs.	**Geometry:** Identify differences between regular and irregular polygons. **Statistics:** Identify which graphs and charts represent data most appropriately.
Year 6	**Place Value:** Read, Write, Order and compare numbers up to 10,000,000 and determine the value of each digit. **Addition:** Add and subtract whole numbers with more than 5 digits, including using formal written methods. **Multiplication and division:** Multiply muti-digit numbers up to 4 digits by a 2-digit number using a formal written methods and identify common multiples, common factors & prime numbers. **Fractions:** Use common factors to simplify fractions **Measurement:** Use, read, write and convert between standard units. **Geometry:** Draw 2D shapes using given dimensions and angles.	**Number and Place Value**: Use negative numbers in context and calculate intervals across 0. **Addition and Subtraction:** Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. **Multiplication and division:** Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate. **Fractions:** Add and subtract fractions with different denominators and mixed numbers. **Measurement:** Calculate the area of parallelograms and triangles. **Geometry:** Draw, translate, and reflect simple shapes on the coordinate plane. **Statistics**: Interpret and construct pie charts and line graphs and use these to solve problems	**Number and Place Value**: Solve increasingly complex number problems. **Addition and Subtraction:** Use estimation and rounding to check answers and make estimates. **Multiplication and division:** Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. **Fractions:** Recall and use equivalences between simple fractions, decimals and percentages. **Measurement:** Calculate, estimate and compare volume of cubes and cuboids using standard units. **Geometry**: Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius **Statistics:** Calculate and interpret the mean as an average