# Whole School Yearly Curriculum Map – Maths

| | Autumn 1 | Autumn 2 |
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| **Reception** | **Subitise within 3**<br>**Develop 1-1 correspondence**<br>**All numbers can be made of 1's**<br>**Compose collections within 4**<br>**Compare by looking, more than, fewer than**<br>**Measure**<br>Compare size, mass & capacity. Objects can be compared and ordered according to their size<br>**Explore pattern**<br>Continuing patterns, making their own pattern | **Subitise within 5**<br>**Cardinality of 5**<br>**Count beyond 5**<br>**Recognise numerals relating to these quantities**<br>**Wholes & parts**<br>**Composition of numbers within 5**<br>**Compare sets by subitizing & matching**<br>**Shape**<br>Circles & triangles<br>Positional language – describe how items are positioned in relation to each other<br>Shapes with 4 sides<br>**Time**<br>Beginning to use time to sequence events<br>Night & Day<br>Use language to describe when events happen<br>Measure time in simple ways e.g. how many sleeps |
| **Year 1** | **Previous Reception experiences & counting within 100 (7 weeks)**<br>Count within 100 in different ways | **Comparison of quantities & part whole relationships (3 weeks)**<br>Count and compare sets of objects<br>Use equality & inequality symbols to compare sets of objects and expressions<br>Know a whole represents a set of objects<br>Identify part of a whole<br>Use a part whole model to represent a whole partitioned into two or more parts<br>**Numbers 0 to 5 (2 weeks)**<br>Partition numbers 1 to 5 in different ways<br>Partition numbers 1 to 5 in a systematic way<br>Find a missing part<br>Show one more or one less |

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| **Year 2** | **Numbers 10 to 100 (4 weeks)**<br>Represent, add & subtract multiples of ten<br>Estimate multiples of 10 on a number line<br>Count a large group in 10s and 1s<br>Represent a number from 20-99 in different ways<br>Compare 2 2 digit numbers<br>Partition two digit numbers into tens and ones<br>Add two 2 digit numbers by partitioning into tens and ones<br>**Calculations within 20 (3 weeks)**<br>Add 3 addends<br>Add and subtract two numbers that bridge through 10<br>Compare numbers using more or less<br>Calculate the difference<br>Explain the difference between consecutive numbers | **Fluently add & subtract within 10 (1 week)**<br>Demonstrate fluency of addition & subtraction within 10<br>**Addition & subtraction of two-digit numbers (2 weeks)**<br>Add & subtract a single digit from a 2 digit number using number bonds to ten<br>Find 10 more or ten less than a two digit number<br>Add & subtract a multiple of ten from a two digit number<br>Partition a 2 digit number into 2 or 3 parts<br>**Introduction to multiplication (4 weeks)**<br>Represent equal groups as repeated addition<br>Represent equal groups as multiplication<br>Use knowledge of multiplication to calculate the product |
| **Year 3** | **Adding & subtracting across 10 (2 weeks)**<br>Add 3 addends finding 2 that total 10<br>Add & subtract 2 addends that bridge through 10<br>**Numbers to 1000 (5 weeks)**<br>Composition of 100<br>Use known facts to find a 2 digit and 1 digit number that make 100<br>Find complements to 100<br>Represent a 3 digit number up to 199 in different ways<br>Find 10 more or 10 less than any given number<br>Position 3 digit numbers on a number line<br>Compare and order sets of 3 digit numbers<br>Partition 3 digit numbers in different ways | **Numbers to 1000 (5 weeks)**<br>Add/subtract multiples of 10 bridging 100<br>Count forwards & backwards in multiples of 2, 20, 5, 50 and 25<br>Measure length<br>Measure volume, capacity & mass |
| **Year 4** | **Review of column addition & subtraction (3 weeks)**<br>Add a pair of 2 digit numbers using column addition with regrouping<br>Subtract from a 3 digit number with exchanging<br>**Numbers to 10,000 (5 weeks)**<br>Composition of 1000<br>Add & subtract multiples of 100<br>Compare & order 4 digit numbers<br>Round 4 digit numbers to nearest thousand, hundred & ten<br>Add & subtract 4 digit numbers using column method<br>Know how many 100s, 200s, 250s & 500s, 1000 is composed of | **Perimeter (2 weeks)**<br>Perimeter is calculated by adding the sides of a 2D shape<br>Perimeter of a rectangle can be calculated by adding or multiplying<br>Perimeter of a regular polygon can be calculated by multiplication<br>**3,6,9 times tables (3 weeks)**<br>Explain the relationship between multiples of 3 and multiples of 6<br>Explain the relationship between multiples of 3 and multiples of 9 |

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| **Year 5** | **Decimal fractions – 10ths and 100ths (5weeks)**<br>Comparing & ordering numbers with up to 3 decimal places<br>Adding & subtracting<br>Rounding to nearest 10th and whole number<br>Comparing metres and centimetres<br>**Money (2 weeks)**<br>Compare amounts of money<br>Convert quantities between pounds and pence<br>Use most efficient strategies when adding & subtracting money<br>Find change when purchasing several items | **Negative numbers (2 weeks)**<br>Identify & place negative numbers on a number line<br>Calculate intervals using positive & negative numbers<br>Explain negative numbers used on a coordinates grid<br>Use knowledge of positive and negative numbers to interpret graphs<br>**Short multiplication & short division (6 weeks)**<br>Multiply up to a 3 digit by a single digit using expanded and short multiplication<br>Divide up to a 3 digit number by a single digit using short division with exchanging and remainders |
| **Year 6** | **Calculating using knowledge of structures (1) (6 weeks)**<br>Calculate the value of a missing part<br>Use the 'same sum' rule to balance equations<br>Solve calculations with missing addends<br>Use the 'same difference' rule to balance equations<br>**Multiples of 1000 (2 weeks)**<br>How is 10,000 composed<br>How is 100,000 composed<br>Read & write numbers up to 1 million | **Multiples of 1000 (2 weeks)**<br>Place six digit multiples of one thousand multiples on a number line<br>Read scales in graphing & measure contexts<br>**Numbers up to 10,000,000 – place value (4 weeks)**<br>Compose 7 or 8 digit numbers using common intervals<br>Recognise and create numbers that contain place holding zeros<br>Determine the value of digits in numbers up to tens of millions<br>Add & subtract numbers crossing the millions boundary<br>Rounding 7 digit numbers to the nearest million or hundred thousand<br>Add & Subtract numbers with up to 7 digits using column method<br>**Draw, compose & decompose shapes (2 weeks)**<br>3D shapes are composed from 2D nets<br>The area remains the same on decomposed 2D shapes<br>Shapes with the same area can have different perimeters<br>Shapes with the same perimeter can have different areas |

| | Spring 1 | Spring 2 |
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| Reception | **Subitise & explore patterns within 5 + 1 more**<br>**Verbal counting to 20 & beyond**<br>**Use fingers to represent quantities between 5 & 10**<br>**Order numbers**<br>**Composition of 5 recalling missing parts**<br>**Composition of 6**<br>**Numbers within 10 are composed of 5 and a bit**<br>**Compare sets identifying when sets are equal**<br>**Explore ways to make unequal sets equal**<br>**Compare Mass & capacity (2)**<br>Beginning to use units to compare objects | **Explore symmetrical patterns – link to doubles**<br>**Cardinality within 10**<br>**Counting patterns beyond 20**<br>**Composition of odd & even numbers**<br>**Composition of numbers within 10**<br>**Compare numbers – reason about which is more**<br>**Measure**<br>Length, height, use correct language, make direct comparisons<br>**Time**<br>Order and sequence important times in their day<br>Describe significant events in their lives<br>Talk about events they are looking forward to<br>**Shape & Space**<br>Explore and manipulate 3D shapes<br>Spatial awareness – seeing things from different viewpoints<br>**Pattern**<br>Explore patterns that use items more than once<br>Spotting a mistake |
| Year 1 | **Recognise, compose, decompose & manipulate 2D & 3D shapes (3 weeks)**<br>Explore, discuss and compare 3D shapes<br>Identify 2D shapes within 3D shapes<br>Explore, discuss and compare 2D shapes<br>**Numbers 0 to 10 Place value, addition & subtraction (3 weeks)**<br>Represent the numbers 6 to 10 using 5 and a bit structure<br>Identify the whole and parts of the numbers 6 to 10 using the five and a bit structure<br>Explain where 6, 7, 8 & 9 lie on a number line<br>Explain how even and odd numbers can be partitioned<br>Partition numbers 6 to 10 in different ways<br>Partition numbers 6 to 10 in a systematic way<br>Identify a missing part when the whole and 1 part is known | **Additive Structures (4 weeks)**<br>Combine 2 or more parts to make a whole<br>Know the commutative law<br>Understand the = sign<br>Add parts to find the value and write an equation<br>Find the missing addend<br>Represent 'first, then, now' stories with an addition or subtraction equation<br>Work out the missing part of a subtraction<br>Explain that addition & subtraction are inverse operations<br>**Addition & Subtraction facts within 10 (3 weeks)**<br>Explain what happens when 2 is added or subtracted from odd or even numbers<br>Explain what happened when zero is added or subtracted<br>Explain what happens when a number is added to or subtracted from itself<br>Explain what doubling and halving means<br>Use knowledge of doubles & halves to create near doubles or halves |

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| **Year 2** | **Introduction to multiplication (3 weeks)**<br>Represent the two times, five times and ten times tables in different ways<br>Represent multiplication equations in different ways<br>Use two, five and ten times table knowledge to solve problems<br>Double and halve two digit numbers<br>**Introduction to division structures (2 weeks)**<br>Calculate the number of equal groups<br>Skip count using the divisor to find the quotient | **Shape**<br>**(2 weeks)**<br>Discuss and compare the shape, size & vertices of polygons<br>Investigate how polygons form to create 3D shapes<br>Describe and sort 3D shapes<br>Discuss and compare the shape and size of 3D shapes<br>**Addition & subtraction of two-digit numbers (2) (3 weeks)**<br>Add 2 two digit numbers not crossing ten and crossing ten<br>Subtract 2 two digit numbers not crossing ten and crossing ten |
| **Year 3** | **Right Angles (2 weeks)**<br>A right angles is a square corner<br>Rectangle is a 4 sided polygon with 4 right angles<br>Square is a rectangle in which the 4 sides are equal length<br>**Manipulating the additive relationship and securing mental calculation (4 weeks)**<br>Add a pair of 2 or 3 digit numbers using redistribution<br>Add a pair of 2 or 3 digit numbers, bridging a multiple of 10, using partitioning<br>Subtract 2 or 3 digit numbers by finding the difference<br>Use knowledge of additive relationship to rearrange equations | **Column addition (2 weeks)**<br>Add 2 digit numbers using column addition<br>Add 2 digit numbers with regrouping<br>**2,4,8 times tables (3 weeks)**<br>Explain the relationship between multiples of 2 and multiples of 4 and multiples of 8<br>Use knowledges of the divisibility rule of 2, 4 and 8 to solve problems<br>Scale know multiplication facts by 10<br>Scale division derived from multiplication facts by 10<br>**Column subtraction (1 week)**<br>Subtract from up to a 3 digit number with exchanging |
| **Year 4** | **3,6,9 times tables (1 week)**<br>Use the divisibility rules for divisors of 3, 6 & 9<br>**7 times table and patterns (2 weeks)**<br>Identify patterns of odd and even numbers in the times table<br>Represent a square number<br>Knowledge of divisibility rules to solve problems<br>**Understanding & manipulating multiplicative relationships (3 weeks)**<br>Partition factors in a multiplication equation in different ways using representations<br>Use the distributive law to calculate products beyond known facts<br>Explain why zeros can be added or removed when multiplying/dividing by multiples of 10 | **Understanding & manipulating multiplicative relationships (2 weeks)**<br>Scale known multiplication facts by 100<br>Scale division derived from multiplication facts by 100<br>**Coordinates (2 weeks)**<br>Move objects on a grid using directions<br>Describe translations<br>Mark the position of points specified by coordinates in the first quadrant<br>Draw polygons specified by coordinates in the first quadrant<br>Translate polygons in the first quadrant |

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| **Year 5** | **Area & scaling (5 weeks)**<br>Make shapes with the same area<br>Compare the area of different shapes<br>Calculate the area of a rectangle using multiplication<br>Calculate the area of rectilinear shapes<br>Compare & describe lengths using multiplication and division knowledge<br>Compare & describe mass, capacity & time using multiplication and division knowledge<br>**Calculating with decimal fractions (2 weeks)**<br>Multiply and divide a number by 10, 100, 1000<br>Use this knowledge to convert between units of measure (length, mass & capacity) | **Calculating with decimal fractions (1 week)**<br>Explain how to use multiplying by 10 or 100 to multiply 1 digit numbers by decimal fractions.<br>Explain how to use multiplying by 10 or 100 to divide 1 digit numbers by decimal fractions.<br>**Factors, multiples & primes (4 weeks)**<br>Calculate the volume of a cuboid<br>Explain what a cube number is<br>Calculate the volume of compound shapes<br>Explain what a factor is and use arrays & multiplication/division facts to find them<br>Use factors to explain when a number is a square number<br>Identify a prime or composite number<br>Find common factors<br>Use factor pairs of 100 to calculate efficiently |
| **Year 6** | **Multiplication & division (4 weeks)**<br>Multiply a 3 digit by a 2 digit number<br>Use long multiplication to multiply up to a 4 digit number by a 2 digit number<br>Use short & long division with and without remainders<br>Use short & long division with fraction and decimal remainders<br>Explain the relationships between divisors and quotients<br>**Area, perimeter, position & direction (2 weeks)**<br>Calculate the area of a parallelogram & a triangle<br>Describe the relationship between scale factors & side lengths of 2 shapes<br>Describe positions on the full coordinate grid<br>Draw and translate simple shapes on the coordinate plane and reflect them in the axes | **Fractions & percentages (6 weeks)**<br>Write a fraction in its simplest form<br>Add & subtract related unit and non-unit fractions<br>Add & subtract non related fractions with different denominators<br>Multiply two fractions<br>Divide a fraction by a whole number<br>Convert percentages to decimal and fractions |

| | Summer 1 | Summer 2 |
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| Reception | **Familiar subitizing arrangements including 1 more or doubles**<br>**Patterns – same number different arrangement**<br>**Verbal counting to 20 & beyond**<br>**Develop accuracy in verbal & object counting**<br>**Explore the composition of 10**<br>**Order sets of objects link to ordinal numbers**<br>**Spatial reasoning (1)**<br>Match, rotate, manipulate shapes to fill a given space<br>**Spatial reasoning (2)**<br>Shapes can be combined & separated to make new shapes | **Consolidate understanding of concepts previously taught in a variety of contexts and with different numbers**<br>**Patterns**<br>Continue to copy, continue & create a widening range of repeating patterns and symmetrical constructions<br>**Spatial reasoning (3)**<br>Understand that places and models can be replicated and looked at from different positions<br>**Spatial Reasoning (4)**<br>Make maps and plans to represent places and use these to see where things are in relation to other things |
| Year 1 | **Numbers 0 to 20 Place value (4 weeks)**<br>Use knowledge of 10 and a bit to solve problems<br>Explore odd and even numbers within 20<br>Double the numbers 6 to 9<br>Use knowledge of addition and subtraction facts to 10 to add and subtract within 20<br>**Unitising and coin recognition (5 weeks)**<br>Count efficiently in groups of 2, 5 and ten<br>Recognise and explain the value of 1p, 2p, 5p and 10p<br>Know that a single coin can be worth several pennies<br>Calculate the total value of a set of 2p coins, 5p coins and 10p coins<br>Compare sets of 2p, 5p and 10p coins<br>Work out how many coins are needed to make a value of 10p and 20p | **Position & direction (1 week)**<br>Describe position, direction & movement including whole, half, quarter and three quarter turns<br>**Time (2weeks)**<br>Sequence events in chronological order<br>Recognise and use language relating to dates e.g. days of the week, week, months, years<br>Tell the time to the hour and half past and draw hands on a clock face to show these times |

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| **Year 2** | **Money (1 week)**<br>Combine amounts to make a particular value<br>Find different combinations of coins to make the same amount<br>Give change<br>**Fractions (2 weeks)**<br>Find ½, ¼, 1/3 of a length, shape or set of objects<br>Find ½, ¼ or 1/3 of a number<br>Find ¼ and ¾ for an object, shape, set of objects or quantity<br>Recognise the equivalence of 2/4 and ½<br>**Time (1 week)**<br>Compare & sequence intervals of time<br>Tell and write the time to five minutes including quarter past/to the hour<br>Know the number of minutes in an hour & the number of hours in a day<br>**Position & Direction (1 week)**<br>Order and arrange combinations of objects in patterns & sequences<br>Distinguish between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise & anti clockwise) | **Multiplication & division – doubling, halving, quotative & partitive division (3 weeks)**<br>Identify & explain relationships between the 5 and 10 times tables<br>Explain how times tables facts help to find the quotient<br>Explain how dividing by 2 is halving<br>Use divisibility rules when the divisor is two, ten and five<br>**Sense of measure – capacity, volume, mass (2 weeks)**<br>Choose & use appropriate standard units of measure to length/height, mass, temperature & capacity<br>Compare and order lengths, mass, volume/capacity and record results using < > and = |

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| **Year 3** | **Unit fractions (5 weeks)**<br>Identify the number of equal or unequal parts in a whole<br>Construct a whole when given a part and the number of parts<br>Represent unit fractions in different ways<br>Identify parts and whole in different contexts<br>Compare & order unit fractions looking at the denominator<br>Calculate the value of a part using division facts<br>Find fractions of quantities using division facts | **Non-unit fractions (4 weeks)**<br>Identify the equal or unequal parts in a whole<br>Place fractions on a number line<br>Compare non unit fractiosn with the same denominator<br>Compare fractions with the same numerator<br>Add & subtract fractions with the same denominator<br>Subtract fractions from a whole<br>**Parallel & perpendicular sides in polygons (2 weeks)**<br>Make & draw compound shapes with and without parallel and perpendicular lines<br>Extend lines & sides to identify parallel and perpendicular lines<br>Draw shapes with given properties<br>**Time (1 week)**<br>Tell and write the time from analogue clocks using Roman numerals and 12 and 24 hours<br>Compare times<br>Know number of seconds in a minute, number of days in each month, year and leap year<br>Compare duration of events |
| **Year 4** | **Review of fractions (1 week)**<br>Identify the number of equal or unequal parts in a whole<br>Explain the size of a part in relation to the whole<br>Construct a whole when given a part & the number of parts<br>**Fractions greater than 1 (5 weeks)**<br>Compose & decompose quantities made of whole numbers & fractional parts<br>Estimate the position of numbers on a number line<br>Compare & order mixed numbers<br>Express a quantity as a mixed number and improper fraction<br>Convert a quantity from an improper fraction to a mixed number<br>Add mixed numbers<br>Subtract a proper fraction from a mixed number | **Symmetry in 2D shapes (2 weeks)**<br>Investigate lines of symmetry<br>Reflect polygons in a line of symmetry<br>Reflect polygons that are dissected by a line of symmetry<br>**Time (1 week)**<br>Read, write & convert time between analogue & digital, 12 hour and 24 hour<br>Convert hours to minutes, minutes to seconds, years to months, weeks to days<br>**Division with remainders (2 weeks)**<br>Explain how the remainder relates to the divisor in a division equation<br>Interpret the answer to a division calculation to solve a problem |

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| **Year 5** | **Fractions (7 weeks)**<br>Multiply a proper fraction by a whole number<br>Multiply an improper fraction by a whole number<br>Multiply a mixed number by a whole number<br>Find a unit fraction of a quantity (mentally & written)<br>Multiply a whole number by a proper fraction<br>Describe and compare 2 fractions<br>Explain the relationship within families of equivalent fractions<br>Use knowledge of common equivalents to compare fractions with decimals | **Converting units (2 weeks)**<br>Convert between units of measure<br>Convert from and to fraction and decimal fraction quantities of larger amounts<br>Use approximate equivalences between metric units and common imperial units<br>Convert between miles and kilometres<br>Convert between units of time<br>**Angles (3 weeks)**<br>Use acute, obtuse and reflex to describe the size of angles<br>Estimate the size of angles<br>Measure angles accurately using protractors |
| **Year 6** | **Statistics (1 week)**<br>Interpret and construct pie charts and line graphs<br>Calculate and interpret the mean as an average<br>**KS2 tests (1 week)** | **Ratio & proportion (2 weeks)**<br>Describe the relationship between 2 factors in a ratio context<br>Use multiplication & division to calculate unknown values<br>Identify & describe the relationship between 2 shapes using scale factors and ratios<br>**Calculating using knowledge of structures (2) (1 week)**<br>Balance equations using addition/subtraction expressions<br>**Solving problems with two unknowns (2 weeks)**<br>Represent problems with 2 unknowns using a bar model<br>Explain the values a part/whole model could represent<br>Use diagrams to solve a spatial problem<br>Find all the possible solutions<br>Balance an equation with 2 unknowns<br>**Order of operations (1 week)**<br>Use distributive law to solve equations<br>**Mean average (1 week)**<br>Calculate the mean of a set of data<br>Use mean to make comparisons between 2 sets of information |