

Maths Long Term Plan

Year 1	Autumn	Spring	Summer
Key Topics	Number: Place Value (within 10) Number: Addition & Subtraction (within 10) Geometry: Shape Number: Place Value (within 20)	Number: Addition & Subtraction (within 20) Number: Place Value (within 50) Measurement: Length & Height Measurement: Weight and Volume	Number: Multiplication & Division Number: Fractions Geometry: Position and direction Number: Place Value (within 100) Measurement: Money Measurement: Time
Prior Knowledge <i>From the reception programme of study</i>	<ul style="list-style-type: none"> • Just like me! • It's me 1, 2, 3! • Light & Dark 	<ul style="list-style-type: none"> • Alive in 5 • Growing 6, 7, 8 • Building 9 & 10 	<ul style="list-style-type: none"> • To 20 and beyond • First, then, now • Find my pattern • On the move
Sequence of Learning See cover page for further guidance. Also, planning documentation and support is found via the national curriculum shared drive and/or the thirdspace maths hub.	<p>Number: Place Value (within 10)</p> <ul style="list-style-type: none"> • Sorting, counting and representing objects • Counting, reading and writing forwards and backwards (between 0 and 10) • One more and one less • Comparing one-to-one correspondence • Comparing groups and numbers (including comparative symbols) • Ordering numbers • Ordinal numbers • Number lines <p>Number: Addition & Subtraction (within 10)</p> <ul style="list-style-type: none"> • Using part-whole models • Addition and subtraction fact families (including using the addition symbol) • Number bonds within and to 10 (including calculating number bonds systematically and comparing number bonds to 10) • Adding numbers • Finding a part and finding how many are left • Subtracting by breaking apart, counting back and finding the difference • Comparing statements and number sentences 	<p>Number: Addition & Subtraction (within 20)</p> <ul style="list-style-type: none"> • Adding by counting on • Finding and making number bonds • Adding by making ten • Subtracting with and without crossing ten • Exploring related addition and subtraction facts • Comparing number sentences <p>Number: Place Value (within 50)</p> <ul style="list-style-type: none"> • Counting forwards and backwards to 50 • Representing numbers to 50 • Finding one more or one less • Comparing and ordering objects and numbers within 50 • Counting in 2s • Counting in 5s <p>Measurement: Length & Height</p> <ul style="list-style-type: none"> • Comparing lengths and heights • Measuring lengths and heights (non-standard units of measure) • Measuring using a ruler 	<p>Number: Multiplication & Division</p> <ul style="list-style-type: none"> • Counting in tens • Making equal groups • Adding equal groups • Making arrays • Finding doubles • Making equal groups (grouping and sharing) <p>Number: Fractions</p> <ul style="list-style-type: none"> • Finding a half • Finding a quarter <p>Geometry: Position and direction</p> <ul style="list-style-type: none"> • Describing turns • Describing position <p>Number: Place Value (within 100)</p> <ul style="list-style-type: none"> • Counting to 100 • Partitioning numbers • Comparing numbers • Ordering numbers • One more and one less <p>Measurement: Money</p>



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	<p>Geometry: Shape</p> <ul style="list-style-type: none"> Recognising and naming 3-D shapes Sort 3-D shapes Recognising and naming 2-D shapes Sort 2-D shapes Making patterns with 2-D and 3-D shapes <p>Number: Place Value (within 20)</p> <ul style="list-style-type: none"> Counting, writing and representing numbers to 20 Represent numbers using tens and ones One more and one less Comparing and ordering groups of objects Ordering numbers 	<p>Measurement: Weight and Volume</p> <ul style="list-style-type: none"> Understanding weight and mass Measuring and comparing mass Measuring capacity and volume Measuring and comparing capacity 	<ul style="list-style-type: none"> Recognising coins Recognising notes Counting in coins <p>Measurement: Time</p> <ul style="list-style-type: none"> Understanding vocabulary of before and after Understanding dates Telling time to the hour and the half hour Writing time Comparing time
<p>Key Vocabulary</p> <p>Vocabulary to be taught via a stem sentence – see document on shared drive for the relevant stem sentences for this programme of study</p>	<p>Place Value:</p> <p>Numeral Numbers Number from 1-1000 Forwards Backwards Equal More/most Less/least Greater than Fewer than Twos (2s) Fives (5s) Tens (10s) Ordinal numbers Consecutive</p> <p>Addition & Subtraction:</p> <p>Add Addition Sum Total Altogether How many more... How much more... Subtract</p>	<p>Length & Height</p> <p>Length Height Taller Shorter Longer Non-standard unit cm Centimetre(s) Ruler</p> <p>Weight & Volume:</p> <p>Heavier Lighter Full Empty Almost full Almost empty More Less</p> <p>Time:</p> <p>Before After Morning Afternoon</p>	<p>Multiplication & Division:</p> <p>Lots of Sets of Groups of Equal groups Array Row Column Patterns Double Doubling Twice as much as... Skip counting</p> <p>Fractions:</p> <p>Fraction Whole Equal Part Equal grouping Equal sharing Parts of a whole Half Quarter</p> <p>Time:</p> <p>Days of the week</p>



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	Takeaway Left (left over) Fewer Difference Minus Equals The same as Addend Shape: Cube Cuboid Pyramid Cone Cylinder Sphere Face Curved Rectangle Square Circle Triangle	Evening First Next Finally	Months of the year O'clock Half past Seconds Minutes Hours Faster Slower Earlier Later Money: Money Coin Note Penny/ pence Pound Price/ cost Spend/ spent Buy/ cost Pay Total
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Year 2	Autumn	Spring	Summer
Key Topics	Number: Place Value Number: Addition & Subtraction Measurement: Money Number: Multiplication & Division	Number: Multiplication & Division Statistics Geometry: Properties of Shape Number: Fractions	Measurement: Length & Height Geometry: Position & Direction Measurement: Time Measurement: Mass, Capacity & temperature
Prior Knowledge From year 1 programme of study	<ul style="list-style-type: none"> Number: Place Value (within 10) Number: Addition & Subtraction (within 10) Geometry: Shape Number: Place Value (within 20) 	<ul style="list-style-type: none"> Number: Addition & Subtraction (within 20) Number: Place Value (within 50) Measurement: Length & Height Measurement: Weight and Volume 	<ul style="list-style-type: none"> Number: Multiplication & Division Number: Fractions Geometry: Position and direction Number: Place Value (within 100) Measurement: Money Measurement: Time
Sequence of Learning See cover page for further guidance.	Number: Place Value <ul style="list-style-type: none"> Counting, reading and writing numbers to 100 Representing numbers to 100 Partitioning using part-whole models 	Number: Multiplication & Division <ul style="list-style-type: none"> Sharing objects into equal groups Making equal groups Dividing by 2, 5 and 10 	Measurement: Length & Height <ul style="list-style-type: none"> Measuring length in centimetres and metres Comparing and ordering length Calculating using the four operations



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<p>Also, planning documentation and support is found via the national curriculum shared drive and/or the thirdspace maths hub.</p>	<ul style="list-style-type: none"> Understanding tens and ones Represent numbers using a place value chart Comparing objects and numbers to 100 Ordering objects and numbers Counting in 2s, 3s, 5s and 10s <p>Number: Addition & Subtraction</p> <ul style="list-style-type: none"> Finding related facts (up to 20) and using known facts Using different strategies to check calculations Comparing number sentences to 20 Number bonds to and within 100 (multiples of 10 and with tens and ones) One more and one less (finding a pattern) Adding and subtracting 10 Using strategies to add 2-digit numbers to 1-digit numbers Using strategies to subtract 1-digit numbers from 2-digit numbers Adding two 2-digit numbers (with and without regrouping) and adding three 1-digit numbers <p>Measurement: Money</p> <ul style="list-style-type: none"> Counting in coins (1p, 2p, 5p, 10p, 20p) Counting in coins and notes (£1, £2, £5, £10, £20) Counting pound and pence separately and together Selecting coins and notes from an amount and finding different ways to make an amount Comparing different values Adding money Finding the difference and finding change Solving two step problems (addition and subtraction) <p>Number: Multiplication & Division</p> <ul style="list-style-type: none"> Recognising and describing equal groups Making equal groups Linking repeated addition and equal groups Using the multiplication symbol Using pictures to find a total and using arrays The two, five and ten times tables 	<ul style="list-style-type: none"> Recognising odd and even numbers <p>Statistics</p> <ul style="list-style-type: none"> Making a tally chart Drawing a pictogram (including 1 to 1) Interpreting a pictogram Drawing and interpreting a block diagram <p>Geometry: Properties of Shape</p> <ul style="list-style-type: none"> Recognising 2-D and 3-D shapes Counting sides and vertices on 2-D shapes Drawing 2-D shapes Recognising lines of symmetry Sorting 2-D and 3-D shapes Making patterns with 2-D and 3-D shapes Counting faces, edges and vertices on 3-D shapes <p>Number: Fractions</p> <ul style="list-style-type: none"> Making equal parts Recognising a half, a quarter, a third, unit fractions and non-unit fractions Finding half, a quarter, a third and three quarters Recognising the equivalent between half and two quarters Counting in fractions 	<p>Geometry: Position & Direction</p> <ul style="list-style-type: none"> Describing movements Describing turns Making patterns with shapes <p>Measurement: Time</p> <ul style="list-style-type: none"> Telling the time to the hour and half past Telling the time to the quarter hour (to and past) Telling the time to the nearest 5 minutes Finding durations of time Comparing durations of time <p>Measurement: Mass, Capacity & temperature</p> <ul style="list-style-type: none"> Comparing mass Measuring mass in grams and kilograms Comparing volume Measuring volume in millilitres and litres Measuring temperature
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<p>Key Vocabulary</p> <p>Vocabulary to be taught via a stem sentence – see document on shared drive for the relevant stem sentences for this programme of study</p>	<p>Place Value: Hundred (one hundred etc) Threes (3s) Exchange Digit Greater than Less than</p> <p>Addition & Subtraction: Commutative Crossing the (tens) boundary or bridging Exchange Regrouping</p> <p>Measurement: Change Buy/ bought Sell/ sold Compare Comparison More/ less More than Less than Greater than Less than Greatest/ least</p> <p>Multiplication & Division Times Multiplication Multiply Multiplied by Multiple of × =</p>	<p>Multiplication & Division Repeated addition Ten/five times as much/many as... Once, twice, three times... ten times Multiplication facts Multiplication table Commutative Law Commutativity Calculation Equation Bar model</p> <p>Shape: Pentagon Hexagon Sides Vertices or vertex Symmetry Line of symmetry Vertical line of symmetry Face Surface Curved surface Edge Apex</p> <p>Fractions: Equivalent Numerator Denominator Two halves/ quarters Unit fraction</p>	<p>Length & Height: Metre Longer Longest Shorter Shortest</p> <p>Position & Direction: Forwards Backwards Up Down Clockwise Anti-clockwise</p> <p>Time: Past To Quarter to Quarter past Duration</p> <p>Mass, Capacity & Temperature: Temperature Degrees Celsius (oC) Increase Decrease Colder Warmer Mass Grams Kilograms Millilitres (ml) Litres (l)</p>
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Year 3	Autumn	Spring	Summer
Key Topics	Number: Place Value Number: Addition & Subtraction Number: Multiplication & Division	Number: Multiplication & Division Measurement: Money Statistics Measurement: Length & Perimeter Number: Fractions	Number: Fractions Measurement: Time Geometry: Properties of Shape Measurement: Mass & Capacity
Prior Knowledge <i>From the year 2 programme of study</i>	<ul style="list-style-type: none"> Number: Place Value Number: Addition & Subtraction Measurement: Money Number: Multiplication & Division 	<ul style="list-style-type: none"> Number: Multiplication & Division Statistics Geometry: Properties of Shape Number: Fractions 	<ul style="list-style-type: none"> Measurement: Length & Height Geometry: Position & Direction Measurement: Time Measurement: Mass, Capacity & temperature
Sequence of Learning See cover page for further guidance. Also, planning documentation and support is found via the national curriculum shared drive and/or the thirdspace maths hub.	<p>Number: Place Value</p> <ul style="list-style-type: none"> Counting in hundreds Representing numbers to 1,000 Representing numbers in 100s, 10s and 1s (using Base 10 and place value counters) Number lines Finding one, ten or one hundred more or less Comparing and ordering objects and numbers within 1,000 Counting in multiples of 50 <p>Number: Addition & Subtraction</p> <ul style="list-style-type: none"> Adding and subtract multiples of 100 Adding 3-digit numbers and 1-digit or 2-digit numbers (with and without regrouping) Subtracting 1-digit or 2-digit numbers from 3-digit numbers (with and without exchanging) Adding two 3-digit numbers (with and without regrouping) Subtracting two 3-digit numbers (with and without exchanging) Identifying patterns between calculations Estimating answers Using the inverse to check answers <p>Number: Multiplication & Division</p>	<p>Number: Multiplication & Division</p> <ul style="list-style-type: none"> Using comparative symbols Using known multiplication facts to solve calculations Multiplying 2-digit numbers by 1-digit numbers (with and without exchanging) Dividing 2-digit numbers by 1-digit numbers Solving division questions involving remainders Using scaling when multiplying and dividing Calculating combinations <p>Measurement: Money</p> <ul style="list-style-type: none"> Recognising and represent money in pounds and pence Converting between pounds and pence Adding money Subtracting money Calculating change <p>Statistics</p> <ul style="list-style-type: none"> Reading and interpreting pictograms Reading, interpreting and drawing bar charts Reading and interpreting tables <p>Measurement: Length & Perimeter</p> <ul style="list-style-type: none"> Measuring length in millimetres 	<p>Number: Fractions</p> <ul style="list-style-type: none"> Identifying equivalent fractions Comparing fractions Ordering fractions Adding fractions Subtracting fractions <p>Measurement: Time</p> <ul style="list-style-type: none"> Months, years and hours in a day Telling the time to the nearest 5 minutes and to the nearest minute Using a.m. and p.m. Understanding the 24-hour clock Finding and comparing durations Calculating start and end times Measuring time in seconds <p>Geometry: Properties of Shape</p> <ul style="list-style-type: none"> Understanding turns and angles Identifying right angles in shapes Comparing angles Drawing accurately Identifying horizontal and vertical lines Identifying parallel and perpendicular lines Recognising and describing 2-D and 3-D shapes



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	<ul style="list-style-type: none"> Recognising and making equal groups Multiplying and dividing by 3 Multiplying and dividing by 4 Multiplying and dividing by 8 	<ul style="list-style-type: none"> Converting between metres and centimetres/ millimetres and centimetres Comparing and ordering lengths Adding and subtracting lengths Measuring and calculating perimeter <p>Number: Fractions</p> <ul style="list-style-type: none"> Identifying unit and non-unit fractions Identifying when fractions are equivalent to one whole Identifying tenths and representing tenths as decimals Counting up and down in tenths Representing fractions on a number line Finding a unit and non-unit fraction of an amount Solving problems involving fractions 	<ul style="list-style-type: none"> Making 3-D shapes <p>Measurement: Mass & Capacity</p> <ul style="list-style-type: none"> Measuring and comparing mass Adding and subtracting mass Measuring and comparing capacity Adding and subtracting capacity
<p>Key Vocabulary</p> <p>Vocabulary to be taught via a stem sentence – see document on shared drive for the relevant stem sentences for this programme of study.</p> <p>Please note, this list is cumulative – see previous year for prior knowledge.</p>	<p>Place Value: Fours (4s) Eights (8s) Fifties (50s) Estimate Approximately or approximate</p> <p>Addition & Subtraction: Addend Sum Minuend Subtrahend Difference Exchange</p> <p>Multiplication & Division Division Divide Divided by Divided into Repeated subtraction Left over One each, two each, three each...</p>	<p>Measurement Millimetre(s) Perimeter Estimate Leap year School/ work week a.m. p.m. 24-hour</p> <p>Fractions: Equivalent Numerator Denominator Two halves/ quarters Third Unit fraction Tenths Sixths Sevenths Eights</p> <p>Multiplication & Division: Threes</p>	<p>Properties of Shape: Turn Angle Clockwise Anti-clockwise Prism Polygon</p> <p>Angles: Right angle Acute Obtuse Horizontal Vertical Parallel Perpendicular</p> <p>Fractions Quarter Third Eighth Threes Fours Eights</p>



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	ten each Group in pairs, threes... tens Multiple Division facts Commutative Law Commutativity Calculation Equation \div $=$	Fours Eights Product Remainder Short division Scaling (integer) Short multiplication Associative Law Associativity Scaling (integers) Correspondence	Product Factor
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Year 4	Autumn	Spring	Summer
Key Topics	Number: Place Value Number: Addition & Subtraction Measurement: Length & Perimeter Number: Multiplication & Division	Number: Multiplication & Division Measurement: Area Number: Fractions Number: Decimals	Number: Decimals Measurement: Money Measurement: Time Statistics Geometry: Properties of Shape Geometry: Position & Direction
Prior Knowledge <i>From the year 3 programme of study</i>	<ul style="list-style-type: none"> Number: Place Value Number: Addition & Subtraction Number: Multiplication & Division 	<ul style="list-style-type: none"> Number: Multiplication & Division Measurement: Money Measurement: Length & Perimeter Number: Fractions 	<ul style="list-style-type: none"> Number: Fractions Measurement: Time Geometry: Properties of Shape Measurement: Mass & Capacity
Sequence of Learning	Number: Place Value <ul style="list-style-type: none"> Reading and writing Roman numerals to 100 	Number: Multiplication & Division <ul style="list-style-type: none"> The 11 and 12 times tables Multiplying three numbers 	Number: Decimals <ul style="list-style-type: none"> Making a whole Writing decimals



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<p>See cover page for further guidance.</p> <p>Also, planning documentation and support is found via the national curriculum shared drive and/or the thirdspace maths hub.</p>	<ul style="list-style-type: none"> • Rounding to the nearest 10, 100 and 1,000 • Counting in 1,000s and finding 1,000 more or less • Representing numbers using 1,000s, 100s, 10s and 1s • Partitioning numbers • Number lines • Comparing and ordering 4-digit numbers • Counting in 25s • Understanding negative numbers <p>Number: Addition & Subtraction</p> <ul style="list-style-type: none"> • Adding and subtracting ones, tens, hundreds and thousands • Adding two 4-digit numbers (with and without regrouping) • Subtracting two 4-digit numbers (with and without exchanging) • Identifying efficient methods • Using rounding to estimate answers • Using different strategies to check answers <p>Measurement: Length & Perimeter</p> <ul style="list-style-type: none"> • Converting between kilometres and metres • Calculating perimeter (rectangles and rectilinear shapes) <p>Number: Multiplication & Division</p> <ul style="list-style-type: none"> • Multiplying and dividing by 10 and 100 • Multiplying by 1 and 0 • Dividing by 1 and itself • Multiplying and dividing by 6, 9 and 7 	<ul style="list-style-type: none"> • Understanding and identifying factor pairs • Using different methods to complete calculations • Multiplying a 2-digit number by a 1-digit number and multiplying a 3-digit number by a 1-digit number • Dividing a 2-digit number by a 1-digit number (including with remainders) and dividing a 3-digit number by a 1-digit number • Solving correspondence problems <p>Measurement: Area</p> <ul style="list-style-type: none"> • Understanding area • Finding the area by counting squares • Making rectilinear shapes from squares • Comparing the area of rectilinear shapes <p>Number: Fractions</p> <ul style="list-style-type: none"> • Understanding fractions • Finding and showing equivalent fractions • Understanding and showing fractions greater than one • Counting in fractions greater than one • Adding two or more fractions • Subtracting fractions (including from a whole number) • Finding a fraction of a quantity • Using fractions to calculate quantities <p>Number: Decimals</p> <ul style="list-style-type: none"> • Understanding and recognising tenths and hundredths • Understanding tenths as decimals • Reading and representing tenths on a place value grid • Representing tenths on a number line • Dividing 1-digit and 2-digit numbers by 10 • Recognising and describing hundredths • Understanding hundredths as decimals • Reading and representing hundredths on a place value grid • Dividing 1-digit and 2-digit numbers by 100 	<ul style="list-style-type: none"> • Comparing and ordering decimals • Rounding decimals • Halves and quarters as fractions and decimals <p>Measurement: Money</p> <ul style="list-style-type: none"> • Writing pounds and pence using decimals • Ordering money • Estimating money totals • Completing calculations involving the four operations <p>Measurement: Time</p> <ul style="list-style-type: none"> • Converting between hours, minutes and seconds • Converting between years, months, weeks and days • Converting between analogue and digital time (12) <p>Statistics</p> <ul style="list-style-type: none"> • Interpreting a range of charts • Solving problems using charts • Reading and creating line graphs • Solving problems using line graphs <p>Geometry: Properties of Shape</p> <ul style="list-style-type: none"> • Identifying angles • Comparing and ordering angles • Classifying triangles • Identifying quadrilaterals • Identifying lines of symmetry in 2-D shapes • Completing symmetrical figures <p>Geometry: Position & Direction</p> <ul style="list-style-type: none"> • Describing a position • Drawing on a grid • Moving shapes on a grid • Describing movements on a grid
<p>Key Vocabulary</p> <p>Vocabulary to be taught via a stem sentence – see document on shared drive for the relevant</p>	<p>Place Value:</p> <p>Thousand Partition Partitioning Rounding Sixes (6s)</p>	<p>Decimals:</p> <p>Hundredths Decimal Decimal point Decimal place Tenths</p>	<p>Measurement:</p> <p>Millimetre(s) Perimeter Estimate Leap year School/ work week</p>



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<p>stem sentences for this programme of study.</p> <p>Please note, this list is cumulative – see previous year for prior knowledge.</p>	<p>Sevens (7s) Nines (9s) Twenty-fives (25s) Positive (number) Negative (number) Roman Numeral</p> <p>Measurement: Kilometre Convert Equivalent Kilo- (prefix) Right angle Rectilinear shape Area Digital Analogue Estimate Rounded Approximate Approximately</p> <p>Multiplication & Divison: Inverse Distributive law Multiplying by 0 and 1 Multiplying by 10, 10</p>	<p>Hundredths Place holder (zero)</p> <p>Multiplication & Division: Inverse Dividend Divisor Quotient Divisible by Dividing by 10, 100 Factor Factor pair</p>	<p>a.m. p.m. 24-hour</p>
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Year 5	Autumn	Spring	Summer
Key Topics	Number: Place Value Number: Addition & Subtraction Statistics Number: Multiplication & Division Measurement: Perimeter & Area	Number: Multiplication and Division Number: Fractions Number: Decimals & Percentages	Number: Decimals Geometry: Properties of Shape Geometry: Position & Direction Measurement: Converting Units Measurement: Volume
Prior Knowledge <i>From the year 4 programme of study</i>	<ul style="list-style-type: none"> Number: Place Value Number: Addition & Subtraction Measurement: Length & Perimeter Number: Multiplication & Division 	<ul style="list-style-type: none"> Number: Multiplication & Division Measurement: Area Number: Fractions Number: Decimals 	<ul style="list-style-type: none"> Number: Decimals Measurement: Money Measurement: Time Statistics Geometry: Properties of Shape Geometry: Position & Direction
Sequence of Learning See cover page for further guidance. Also, planning documentation and support is found via the national curriculum shared drive and/or the thirdspace maths hub.	<p>Number: Place Value</p> <ul style="list-style-type: none"> Recognising and representing numbers to a million Reading and writing Roman numerals to 1,000 Rounding within a million Recognising and representing numbers to 100,000 Ordering and comparing numbers to a million Counting in powers of 10 Negative numbers <p>Number: Addition & Subtraction</p> <ul style="list-style-type: none"> Adding whole numbers with more than 4 digits Subtracting whole numbers with more than 4 digits Rounding to estimate and approximate Using inverse operations Solving multi-step problems <p>Statistics</p> <ul style="list-style-type: none"> Reading and interpreting line graphs Drawing line graphs 	<p>Number: Multiplication and Division</p> <ul style="list-style-type: none"> Multiplying numbers with up to 4-digits numbers by 1-digit numbers Multiplying 2-digit numbers by 2-digit numbers (area model and written method) Multiplying 3-digit or 4-digit numbers by 2-digit numbers Divide 4-digit numbers by 1-digit numbers, including dividing with remainders <p>Number: Fractions</p> <ul style="list-style-type: none"> Recognising and finding equivalent fractions Converting improper fractions to mixed numbers and converting mixed numbers to improper fractions Counting forwards and backwards in fractions Comparing and ordering fractions less than one and greater than one Adding fractions (including with the same denominator, within 1, adding three or more fractions, where the total is greater than one and mixed numbers) Subtracting fractions (including with the same denominator, breaking the whole, mixed numbers) 	<p>Number: Decimals</p> <ul style="list-style-type: none"> Adding and subtracting decimals within 1 Finding complements to 1 Adding numbers (crossing the whole, with the same number of decimal places and with different numbers of decimal places) Subtracting numbers with different numbers of decimal places Decimal sequences Multiplying and dividing decimals by 10, 100 and 1,000 <p>Geometry: Properties of Shape</p> <ul style="list-style-type: none"> Measuring angles in degrees Using a protractor to measure angles Drawing lines and angles accurately Calculating angles on a straight line and around a point Calculating lengths and angles in shapes Identifying regular and irregular polygons Reasoning about 3-D shapes



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	<ul style="list-style-type: none"> Solving problems involving line graphs Reading and interpreting tables Reading two-way tables Reading and interpreting timetables <p>Number: Multiplication & Division</p> <ul style="list-style-type: none"> Identifying multiples, factors and common factors Identifying prime numbers, square numbers and cube numbers Multiplying and dividing by 10, 100 and 1,000 Completing calculations with multiples of 10, 100 and 1,000 <p>Measurement: Perimeter & Area</p> <ul style="list-style-type: none"> Measuring and calculating perimeter Calculating the area of rectangles, compound shapes and irregular shapes 	<ul style="list-style-type: none"> Multiplying a unit fraction, non-unit fraction and mixed number by an integer Finding a fraction of an amount and using fractions as operators <p>Number: Decimals & Percentages</p> <ul style="list-style-type: none"> Reading and writing decimals with up to two decimal places Writing fractions less than 1 as a decimal Writing a decimal up to two decimal places as a fraction Understanding the value of thousandths Writing decimals up to three decimal places as fractions and mixed numbers Rounding decimals Ordering and comparing numbers with up to three decimal places Understanding percentages Representing percentages as fractions or decimals and representing fractions as decimals and percentages 	<p>Geometry: Position & Direction</p> <ul style="list-style-type: none"> Reading and plotting coordinates in the first quadrant Reflecting points in a mirror line Identifying coordinates and plotting reflections in the first quadrant Translating shapes (including using coordinates) Describing translations <p>Measurement: Converting Units</p> <ul style="list-style-type: none"> Converting between kilograms/ grams and kilometres/ metres Converting between litres/ millilitres and metres/ millimetres Converting between metric measures Understanding approximate equivalences (metric and imperial) Converting between units of time Reading timetables and calculating durations <p>Measurement: Volume</p> <ul style="list-style-type: none"> Understanding volume Comparing volume Estimating volumes Estimating capacities
<p>Key Vocabulary</p> <p>Vocabulary to be taught via a stem sentence – see document on shared drive for the relevant stem sentences for this programme of study.</p> <p>Please note, this list is cumulative – see previous year for prior knowledge.</p>	<p>Place Value: Ten thousand (10,000) One million (1,000,000) Integer</p> <p>Addition & Subtraction: Additive Estimation Approximate</p> <p>Multiplication & Division Common multiples Composite numbers Multiplying by 10, 100 and 1000 Square Squared</p>	<p>Fractions: Mixed number Improper fraction</p> <p>Decimals & Percentages: Thousandths Lowest common multiple Thousandths Percentage Per cent %</p>	<p>Angles: Reflex Protractor Regular Irregular</p> <p>Position & Direction: Reflection Reflect Mirror line Translation</p> <p>Measurement: Kilograms Milligrams Millilitres</p>



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	Cube Cubed Common factors Prime Prime factors Composite numbers Dividing by 10, 100 and 1,000		Metric Imperial Timetable
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Year 6	Autumn	Spring	Summer
Key Topics	Number: Place Value Number: Addition, Subtraction, Multiplication & Division Number: Fractions Geometry: Position & Direction	Number: Decimals Number: Percentages Number: Algebra Measurement: Converting Units Measurement: Perimeter, Area & Volume Number: Ratio	Statistics Geometry: Properties of Shape Consolidation & Themed projects
Prior Knowledge <i>From the year 5 programme of study</i>	<ul style="list-style-type: none"> Number: Place Value Number: Addition & Subtraction Statistics Number: Multiplication & Division Measurement: Perimeter & Area 	<ul style="list-style-type: none"> Number: Multiplication and Division Number: Fractions Number: Decimals & Percentages 	<ul style="list-style-type: none"> Number: Decimals Geometry: Properties of Shape Geometry: Position & Direction Measurement: Converting Units Measurement: Volume
Sequence of Learning	Number: Place Value <ul style="list-style-type: none"> Numbers to 10,000 	Number: Decimals <ul style="list-style-type: none"> Decimals up to two decimal places 	Statistics <ul style="list-style-type: none"> Read and interpret line graphs



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<p>See cover page for further guidance.</p> <p>Also, planning documentation and support is found via the national curriculum shared drive and/or the thirdspace maths hub.</p>	<ul style="list-style-type: none"> • Numbers to 100,000 • Numbers to a million • Numbers to ten million • Compare and order any number • Round numbers to 10, 100, and 1,000 • Round any number • Negative Numbers <p>Number: Addition, Subtraction, Multiplication & Division</p> <ul style="list-style-type: none"> • Add whole number with more than 4 digits • Subtract whole numbers with more than 4 digits • Inverse operations (addition & subtraction) • Multi-step addition and subtraction problems • Add and subtract integers • Multiply 4-digits by 1-digit • Multiply 2-digits (area model) • Multiply 2-digits by 2-digits • Multiply 3-digits by 2-digits • Multiply up to a 4-digit number by 2-digit number • Divide 4-digits by 1-digit • Divide with remainders • Short division • Division using factors • Long division • Factors • Common factors • Common multiples • Primes to 100 • Squares and cubes • Order of operations • Mental calculations and estimation • Reason from known facts <p>Number: Fractions</p> <ul style="list-style-type: none"> • Equivalent Fractions • Simplify fractions • Improper fractions to mixed numbers • Mixed numbers to improper fractions 	<ul style="list-style-type: none"> • Understand thousandths • Three decimal places • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000 • Multiply decimals and integers • Divide decimals by integers • Division to solve problems • Decimals as fractions • Fractions to decimals • Fractions to decimals <p>Number: Percentages</p> <ul style="list-style-type: none"> • Understand percentages • Fractions to percentages • Equivalent FDP • Order FDP • Percentage of an amount (1) • Percentage of an amount (2) • Percentages – missing values <p>Number: Algebra</p> <ul style="list-style-type: none"> • Find a rule – one step • Find a rule – two step • Forming expressions • Substitution • Formulae • Forming equations • Solve simple one-step equations • Solve two-step equations • Find pairs of values • Enumerate possibilities <p>Measurement: Converting Units</p> <ul style="list-style-type: none"> • Metric measures • Convert metric measures • Calculate with metric measures • Miles and kilometres • Imperial measures 	<ul style="list-style-type: none"> • Draw line graphs • Use line graphs to solve problems • Circles • Read and interpret pie charts • Pie charts with percentages • Draw pie charts • The mean <p>Geometry: Properties of Shape</p> <ul style="list-style-type: none"> • Measure with a protractor • Draw lines and angles accurately • Introduce angles • Angles on a straight line • Angles around a point • Calculate angles • Vertically opposite angles • Angles in a triangle • Angles in a triangle – special cases • Angles in a triangle – missing angles • Angles in special quadrilaterals • Angles in regular polygons • Draw shapes accurately • Draw nets of 3-D shapes
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	<ul style="list-style-type: none"> Fractions on a number line Compare and order (denominator) Compare and order (numerator) Add and subtract fractions Add and subtract fractions Add mixed numbers Add fractions Subtract mixed numbers Subtract fractions Mixed addition and subtraction Multiply fractions by integers Multiply fractions by fractions Divide fractions by integers Divide fractions by integers Four rules with fractions Fraction of an amount Fraction of an amount – find the whole <p>Geometry: Position & Direction</p> <ul style="list-style-type: none"> The first quadrant Four quadrants Translations Reflections 	<p>Measurement: Perimeter, Area & Volume</p> <ul style="list-style-type: none"> Shapes – same area Area and perimeter Area of a triangle (1) Area of a triangle (2) Area of a triangle (3) Area of parallelogram What is volume? Volume – counting cubes Volume of a cuboid <p>Number: Ratio</p> <ul style="list-style-type: none"> Using ratio language Ratio and fractions Introducing the ratio symbol Calculating ratio Using scale factors Calculating scale factors Ratio and proportion problems 	
<p>Key Vocabulary</p> <p>Vocabulary to be taught via a stem sentence – see document on shared drive for the relevant stem sentences for this programme of study.</p> <p>Please note, this list is cumulative – see previous year for prior knowledge.</p>	<p>Place Value: Ten million (10,000,000)</p> <p>Addition, Subtraction, Multiplication & Division: Indices (powers) Lowest common multiple Brackets Order of operations (BIDMAS) Highest common factor Brackets Order of operations (BIDMAS)</p> <p>Position & Direction: Enlarged Enlargement For every</p>	<p>Measurement: Miles Foot Pound Ounces Stone Gallon Pint</p> <p>Ratio: Ratio Scale factor Scale factor of Similar Simplify Proportion</p>	



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	Vertically opposite Quadrant First quadrant Four quadrants		
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