Redbourn Primary School

Sequence of teaching overview in Maths

	Autumn Term	Spring Term	Summer Term
THRIVE VALUES	**Team** – We work collaboratively to solve mathematical challenges. We support each other to make progress. We have opportunities to share understanding and different ways of approaching the same questions. **Healthy** – We stretch our minds with mental calculations. We can apply our learning to real-life situations where measurements, time, ratios and fractions may help us to stay healthy.	**Responsibility –** We take care with calculations and use different methods to check our answers. We are honest and reflective when correcting mistakes. We take care to set out work clearly and systematically. **Innovative** – We consider a range of methods for calculating, to find ways which suit us best or are most appropriate for each task. We understand how maths is essential for the operation of many of the systems and machines in our everyday lives.	**Valued –** We take time to explain our thinking and share ideas. We listen to others' reasoning to develop our own understanding. We look after resources which help us to learn. **Empathetic –** We are kind and supportive if others make errors. We understand we learn from mistakes.
Nursery	Unit outcome Knowledge | Skills | Vocabulary *See WRM Nursery Overview Reciting numbers, number songs and using fingers to show numbers. Comparison 1 more than, fewer than, same Shape, space and measure Pattern 1Explore/repeats Counting 1 Hear and say number names Counting 2 Begin to order number names Subitising I see 1,2 3 Pattern 2 Join in with repeats Pattern 3 Explore patterns Shape, space and measure 2	Unit Outcome Knowledge | Skills | Vocabulary *See WRM Nursery Overview Subitising 2- Show me 1 2 3 Counting 3-Move & Label 1 2 3 Subitising 3-Talk about dots Comparison 2- Compare and sort collections Pattern 4- Lead on own repeats Comparison 3- Match, sort, compare	Unit Outcome Knowledge | Skills | Vocabulary *See WRM Nursery Overview Space, Shape & Measure 3- Explore position and routes Counting 4- Take & give 1 2 3 Shape Space Measure 4- Match, talk, push and pull Shape Space Measure 5- Start to puzzle Pattern 5- Making patterns together Subitising 4- Make games & actions Counting 5- Show me 5 Pattern 6- My Own Pattern Counting 6- Stop at 1 2 3 4 5
Reception	Unit outcome	Unit Outcome	Unit Outcome

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	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
	<u>Block 1 – Match, sort and compare</u> Match objects, Match pictures and objects, Identify a set, Sort objects to a type, Explore sorting techniques, Create sorting rules Compare amounts <u>Block 2 – Talk about measure and pattern</u> Compare size, Compare mass, Compare capacity, Explore simple patterns, Copy and continue simple patterns, Create simple patterns <u>Block 3 – It's me 1, 2, 3</u> Find 1, 2 and 3, Subitise 1, 2 and 3, Represent 1, 2 and 3, 1 more, 1 less, Composition of 1, 2 and 3 <u>Block 4 – Circles and triangles</u> Identify and name circles and triangles, Compare circles and triangles, Shapes in the environment, Describe position <u>Block 5 – 1, 2, 3, 4, 5</u> Find 4 and 5, Subitise 4 and 5, Represent 4 and 5, 1 more, 1 less, Composition of 4 and 5, Composition of 1−5 <u>Block 6 – Shapes with 4 sides</u> Identify and name shapes with 4 sides, Combine shapes with 4 sides Shapes in the environment, My day and night			<u>Block 1 – Alive in 5</u> Introduce zero, Find 0 to 5, Subitise 0 to 5, Represent 0 to 5, 1 more, 1 less, Composition, Conceptual subitising to 5 <u>Block 2 – Mass and capacity</u> Compare mass, Find a balance, Explore capacity, Compare capacity <u>Block 3 – Growing 6, 7, 8</u> Find 6, 7 and 8, Represent 6, 7 and 8, 1 more, 1 less, Composition of 6, 7 and 8, Make pairs – odd and even , Double to 8 (find a double), Double to 8 (make a double) Combine two groups, Conceptual subitising <u>Block 4 – Length, height and time</u> Explore length, Compare length, Explore height, Compare height, Talk about time, Order and sequence time <u>Block 5 – Building 9 and 10</u> Find 9 and 10, Compare numbers to 10, Represent 9 and 10, Conceptual subitising to 10, 1 more, 1 less, Composition to 10, Bonds to 10 (2 parts), Make arrangements of 10, Bonds to 10 (3 parts), Doubles to 10 (find a double), Doubles to 10 (make a double), Explore even and odd <u>Block 6 – Explore 3-D shape</u> Recognise and name 3-D shapes, Find 2-D shapes within 3-D shapes, Use 3-D shapes for tasks, 3-D shapes in the environment, Identify more complex patterns, Copy and continue patterns, Patterns in the environment			<u>Block 1 – To 20 and beyond</u> Build numbers beyond 10 (10-13), continue patterns beyond 10 (10-13), Build numbers beyond 10 (14-20) Continue patterns beyond 10 (14-20), Verbal counting beyond 20, verbal counting patterns. <u>Block 2 – How many now?</u> Add more, How many did I add? Take away, How many did I take away? <u>Block 3 – Manipulate, compose and decompose</u> Select shapes for a purpose, rotate shapes, manipulate shapes, explain shape arrangement, compose shapes, decompose shampes, copy 2D picutres, find 2D shapes within 3D shapes. <u>Block 4 – Sharing and Grouping</u> Explore sharing, sharing, explore grouping, grouping, even and odd sharing, play with and build doubles <u>Block 5 – Visualise, build and map</u> Identify units of repeating patterns, create own, explore own pattern rules, replicate and build scenes and constructions, visualise from different positions, describe positions, give instructions to build, explore mapping, represent maps with models, create own maps from familiar places and from story situations <u>Block 6 – Make Connections</u>		

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					Deepen understanding, patterns and relationships		
Year One	Unit outcome			Unit Outcome			Unit Outcome		
	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
	Place Value (within 10) Sort objects, Count objects Count objects from a larger group Represent objects, Recognise numbers as words, Count on from any number, 1 more, Count backwards within 10, 1 less Compare groups by matching Fewer, more, same, Less than, greater than, equal to, Compare numbers, Order objects and numbers, The number line **Addition and Subtraction** Introduce parts and wholes, Part-whole model, Write number sentences, Fact families - addition facts, Number bonds within 10 Systematic number bonds within 10 Number bonds to 10, Addition - add together, Addition - add more Addition problems, Find a part Subtraction - find a part, Fact families - the eight facts, Subtraction - take away/crossing out (How many left?), Subtraction - take away (How many left?), Subtraction on a number line, Add or subtract 1 or 2 **Shape** Recognise and name 3-D shapes, Sort 3-D shapes, Recognise and name 2-D shapes, Sort 2-D shapes, Patterns with 2-D and 3-D shapes.		**Place Value (10)** One to ten in words, compare, sort order, amount, size, number, count, counting, forwards, backwards, count on, countback, greater than, less than, digit, number line, larger/ largest, bigger / biggest, smaller /smallest, more / more than, less / less than, fewer/ fewer than, equal/ equal to. **Addition and Subtraction** total / in total, sum, plus, add / addition, subtract / subtraction, altogether, number bond, minus, part,	**Place value (within 20)** Count within 20, Understand 10 Understand 11, 12 and 13, Understand 14, 15, 16, Understand 17, 18, 19, Understand 20, 1 more and 1 less, The number line to 20 Use a number line to 20, Estimate on a number line to 20, Compare numbers to 20, Order numbers to 20 **Addition and Subtraction (within 20)** Add by counting on within 20, Add ones using number bonds, Find and make number bonds to 20, Doubles Near doubles, Subtract ones using number bonds, Subtraction – counting back, Subtraction – finding the difference, Related facts, Missing number problems **Place value (within 50)** Count from 20 to 50, 20, 30, 40 and 50, Count by making groups of tens Groups of tens and ones, Partition into tens and ones, The number line to 50, Estimate on a number line to 50, 1 more, 1 less **Length and Height** Compare lengths and heights, Measure length using objects, Measure length in centimetres. **Mass and Volume** Heavier and lighter, Measure mass Compare mass, Full and empty Compare volume, Measure capacity, Compare capacity		**Place value (20)** Eleven- twenty in words, estimate, compare, order, *See all other key vocab in autumn term.* **Addition and Subtraction** Doubles, near doubles, missing number, unknown number, difference, missing, related facts, fact families *See all other key vocab in autumn term.* **Place value (50)** Twenty- fifty in words, groups, grouping, tens, ones, partition. *See all other key vocab in autumn term.* **Length and Height** Height, long, longer, longest,	**Multiplication and division** Count in 2s, Count in 10s, Count in 5s Recognise equal groups, Add equal groups, Make arrays, Make doubles Make equal groups – grouping, Make equal groups – sharing **Fractions** Recognise a half of an object or a shape, Find a half of an object or a shape, Recognise a half of a quantity, Find a half of a quantity, Recognise a quarter of an object or a shape, Find a quarter of an object or a shape, Recognise a quarter of a quantity, Find a quarter of a quantity **Position and Direction** Describe turns, Describe position – left and right, Describe position – forwards and backwards, Describe position – above and below, Ordinal numbers **Place Value (within 100)** Count from 50 to 100, Tens to 100 Partition into tens and ones, The number line to 100, 1 more, 1 less, Compare numbers with the same number of tens, Compare any two numbers **Money** Unitising, recognise coins, recognise notes, count in coins. **Time** Before and after, Days of the week, Months of the year, Hours, minutes		**Multiplication and division** Equal, equally, Unequal, pair Group, grouped lots of groups of, times, array regroup, regrouping, twos, fives, tens, pattern, jumps, odd, even **Fractions** half, halves, quarter quarters, grouping, part, whole, equal parts, same size **Position** Left, right, top Middle, bottom on top of, in front of, behind, between, above below, beneath, around. **Place Value (100)** Numbers fifty one to one-hundred *See all other key vocab in autumn and spring term place value units..*

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		whole, number sentence. **Shape** 2-D, 3-D, rectangle, square, circle, triangle, cube, cuboid, pyramid, cylinder, sphere, side,line straight, curved, flat, shape, corner, base, point, pattern		tall, taller, tallest, short, shorter, shortest wide, wider, widest, narrow, narrower, non-standard units of measure, ruler, centimetres, cm, measure, accurate -. **Mass and Volume** Weigh, weight Heavy, heavier, heavier than, light, lighter, lighter than, lightest, balance, ruler, volume, full, fuller, fullest, almost full, nearly full empty, almost empty, nearly empty , half full, capacity	and seconds, Tell the time to the hour, Tell the time to the half hour.		**Money** coin, notes amount, penny pound, one pence, two pence, five pence, ten pence, twenty pence, fifty pence, combination, money **Time** Before, after, all days of the week, all months of the year, day, week, month, minute, second, tomorrow, yesterday, morning, afternoon, evening, time, clock, watch, O'clock, half past.
Year Two	Unit outcome			Unit Outcome			Unit Outcome		
	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
	Place Value Numbers to 20, Count objects to 100 by making 10s, Recognise tens and ones, Use a place value chart, Partition numbers to 100, Write numbers to 100 in words, Flexibly partition		**Place Value** place value partition, greater than, less than, partition, parts, whole,	**Money** Count money – pence, Count money - pounds (notes and coins), Count money - pounds and pence, choose notes and coins, Make the same amount, compare amounts of money, calculate with money, make		**Money** Price, cost, amount, change value **Multiplication and Division**	**Fractions** Introduction to parts and whole, Equal and unequal parts, recognise a half, find a half, recognise a quarter, find a quarter, recognise a third, find a third, Find the whole, Unit fractions, Non-unit fractions, Recognise the equivalence of a half		**Fractions** two-quarters, third, one-third two-thirds, equivalent, one whole, one and a quarter, one and two-

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	numbers to 100, Write numbers to 100 in expanded form, 10s on the number line to 100, 10s and 1s on the number line to 100, Estimate numbers on a number line, compare objects, compare numbers, Order objects and numbers Count in 2s, 5s and 10s, Count in 3s. **Addition and Subtraction** Bonds to 10 Fact families – addition and subtraction, bonds within 20, Related facts, Bonds to 100 (tens), Add and subtract1s, add by making 10, Add three 1-digit numbers, Add to the next 10, Add across a 10, Subtract across 10, Subtract from a 10 , Subtract a 1-digit number from a 2-digit number (across a 10), 10 more, 10 less, Add and subtract 10s, Add two 2-digit numbers (not across a 10), Add two 2-digit numbers (across a 10), Subtract two 2-digit numbers (not across a 10),Subtract two 2-digit numbers (across a 10), Mixed addition and subtraction, Compare number sentences, Missing number problems. **Shape** Recognise 2-D and 3-D shapes, Count sides on 2-D shapes, Count vertices on 2-D shapes, Draw 2-D shapes, Lines of symmetry on shapes, Use lines of symmetry to complete shapes, Sort 2-D shapes, Count faces on 3-D shapes, Count edges on 3-D shapes, Count vertices on 3-D shapes, Sort 3-D shapes, Make patterns with 2-D and 3-D shapes.	hundreds, tens, ones, expanded form, number line, estimate, compare, order, step counting, multiples, twos, fives, tens, threes. **Addition and Subtraction** Inverse, calculate reordering, mental method, written method, fact family, calculation, one digit, two digit **Shape** Vertical, horizontal, vertices, edge, face / faces, properties, quadrilateral, polygon, pentagon, hexagon, heptagon, octagon, prism, cone, symmetry, line of symmetry surface	a pound, Find change, Two-step problems. **Multiplication and Division** Recognise equal groups, make equal groups, add equal groups, Introduce the multiplication symbol, Multiplication sentences, Use arrays, make equal groups – grouping, make equal groups – sharing, the 2 times-table, divide by 2, Doubling and halving, Odd and even numbers, the 10 times-table, divide by 10, The 5 times-table, Divide by 5, The 5 and 10 times-tables. **Length and Height** Measure in centimetres, Measure in metres, Compare lengths and heights, Order lengths and heights, Four operations with lengths and heights. **Mass Capacity and Temperature** Compare mass, Measure in grams, Measure in kilograms, Four operations with mass, Compare volume and capacity, Measure in millilitres, Measure in litres, Four operations with volume and capacity, Temperature	times tables, multiplication, repeated addition, multiply, multiple, **Length and Height** Height, width metre / m, centimetre / cm, scale, standard units, millimetre / mm **Mass Capacity and Temperature** gram / g, kilogram / kg, scale, litre / l, millilitre / ml, quarter full, three-quarters, temperature,	and two-quarters, recognise three-quarters, find three-quarters, Count in fractions up to a whole. **Time** O'clock and half past, Quarter past and quarter to, tell time past the hour, tell time to the hour, Tell the time to 5 minutes, Minutes in an hour, Hours in a day. **Statistics** Make tally charts, Tables, Block diagrams, draw pictograms (1-1), Interpret pictograms (1-1), Draw pictograms (2, 5 and 10), Interpret pictograms (2, 5 and 10). **Position and Direction** Language of position, Describe movement, Describe turns, Describe movement and turns, Shape patterns with turns.	quarters, one and a half, one and three-quarters, half as much, twice as much, numerator, denominator **Time** quarter past, quarter to, five past, ten past, clockwise, anticlockwise, noon, midday, midnight. **Statistics** Pictogram, tally chart, table, data, Category, Key, sorting, Comparing, horizontal vertical **Position and Direction** Sequence, rotate, angle right angle, straight line, anti-clockwise

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	Unit outcome			Unit Outcome			Unit Outcome		
	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
Year Three	**Place Value** Represent numbers to 100, Partition numbers to 100, Number line to 100, Hundreds, represent numbers to 1,000, Partition numbers to 1,000, Flexible partitioning of numbers to 1000, Hundreds, tens and ones, find 1, 10 or 100 more or less, Number line to 1,000, Estimating on a number line to 1,000, Compare numbers to 1,000, Order numbers to 1,000 Count in 50s. **Addition and Subtraction** Apply number bonds within 10, add and subtract 1s, Add and subtract 10s, Add and subtract 100s, Spot the pattern, Add 1s across a 10, Add 10s across a 100, Subtract 1s across a 10, Subtract 10s across a 100, Make connections, Add two numbers (no exchange), Subtract two numbers (no exchange), Add two numbers (across a 10), Add two numbers (across a 100) ,Subtract two numbers (across a 10), Subtract two numbers (across a 100), Add 2-digit and 3-digit numbers, Subtract a 2-digit number from a 3-digit number, Complements to 100 ,Estimate answers, Inverse operations, Make decisions. **Multiplication and Division** Multiplication - equal groups, Use arrays, Multiples of 2, Multiples of		**Place Value** one hundred and one up to one thousand in words, **Addition and Subtraction** Addition, column subtraction, inverse, operations, exchange **Multiplication and Division**	**Multiplication and Division** Multiples of 10, Related calculations, reasoning about multiplication, multiply a 2-digit number by a 1-digit number – no exchange, multiply a 2-digit number by a 1-digit number – with exchange, Link multiplication and division, divide a 2-digit number by a 1-digit number – no exchange, divide a 2-digit number by a 1-digit number – flexible partitioning, Divide a 2-digit number by a 1-digit number – with reminders, Scaling, How many ways? **Length and Perimeter** Measure in metres and centimetres, Measure in millimetres, Measure in centimetres and millimetres, Metres, centimetres and millimetres, Equivalent lengths (metres and centimetres), Equivalent lengths (centimetres and millimetres), Compare lengths, add lengths, subtract lengths, what is perimeter? Measure perimeter, Calculate perimeter. **Fractions** Understand the denominators of unit fractions, Compare and order unit fractions, Understand the numerators of non-unit fractions, Understand the whole, Compare and order non-unit fractions,		**Multiplication and Division** Link multiplication, flexible partitioning, reminders, scaling. **Length and Perimeter** Perimeter, length millimetre / mm Centimetres /cm **Fractions** Fifths, sixths Sevenths, eighths Ninths, tenths Order, unit-fraction, non-unit fraction, equivalent, continuous	**Fractions** Add fractions, subtract fractions, Partition the whole, Unit fractions of a set of objects, Non-unit fractions of a set of objects, Reasoning with fractions of an amount. **Money** Pounds and pence, Convert pounds and pence, add money, subtract money, Find change. **Time** Roman numerals to 12, Tell the time to 5 minutes, Tell the time to the minute, read time on a digital clock, Use am and pm, Years, months and days, Days and hours, Hours and minutes – use start and end times, Hours and minutes – use durations, Minutes and seconds, Units of time, Solve problems with time. **Shape** Turns and angles, Right angles, compare angles, Measure and draw accurately, Horizontal and vertical, Parallel and perpendicular, Recognise and describe 2-D shapes, draw polygons, Recognise and describe 3-D shapes, Make 3-D shapes. **Statistics** Interpret pictograms, Draw pictograms, Interpret bar charts, Draw bar charts, Collect and represent data, Two-way tables.		**Fractions** *See vocab introduced in yr. 3 fractions spring term* **Money** *See vocab introduced in yr. 1/2* **Time** Roman numerals to XII am, pm, duration, analogue clock, digital, digital clock, 12-hour clock, 24-hour clock, event leap year, intervals **Shape** Orientation, degrees, angle right angle, perpendicular parallel, horizontal, vertical, quadrilateral, polyhedron, polyhedral, acute angle, obtuse angle, reflection,

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	5 and 10, Sharing and grouping, Multiply by 3, Divide by 3, The 3 times-table ,Multiply by 4, Divide by 4, The 4 times-table, Multiply by 8, Divide by 8, The 8 times-table, The 2, 4 and 8 times-tables.	short multiplication, divisible	Fractions and scales, Fractions on a number line, Count in fractions on a number line, Equivalent fractions on a number line, Equivalent fractions as bar models. **Mass and Capacity** Use scales, Measure mass in grams, Measure mass in kilograms and grams, Equivalent masses (kilograms and grams), Compare mass, Add and subtract mass, Measure capacity and volume in millilitres, Measure capacity and volume in litres and millilitres, Equivalent capacities and volumes (litres and millilitres), Compare capacity and volume, Add and subtract capacity and volume.	**Mass and Capacity** gram / g kilogram / kg litre / l millilitre / ml		orientation, three-dimensions, right-angle, triangle **Statistics** bar chart, block graph, scale, title, interpret, frequent, survey, discrete data, continuous data, label, inferring
Year Four	Unit outcome			Unit Outcome			Unit Outcome		
	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
	Place Value Represent numbers to 1,000 Partition numbers to 1,000 Number line to 1,000 Thousands Represent numbers to 10,000 Partition numbers to 10,000 Flexible partitioning of numbers to 10,000 Find 1, 10, 100, 1,000 more or less Number line to 10,000 Estimate on a number line to 10,000 Compare numbers to 10,000 Order numbers to 10,000 Roman numerals Round to the nearest 10 Round to the nearest 100 Round to the nearest 1,000 Round to the nearest 10, 100 or 1,000		**Place Value** thousands Roman numerals (up to 100 / C) negative numbers positive numbers nearest thousand four-digit	**Multiplication and Division (B)** Factor pairs Use factor pairs Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Related facts – multiplication and division Informal written methods for multiplication Multiply a 2-digit number by a 1-digit number Multiply a 3-digit number by a 1-digit number Divide a 2-digit number by a 1-digit number (1) Divide a 2-digit number by a 1-digit number (2) Divide a 3-digit number by a 1-digit number Correspondence problems Efficient multiplication			**Decimals (B)** Make a whole with tenths Make a whole with hundredths Partition decimals Flexibly partition decimals Compare decimals Order decimals Round to the nearest whole number Halves and quarters as decimals **Money** Write money using decimals Convert between pounds and pence Compare amounts of money Estimate with money Calculate with money Solve problems with money **Time** Years, months, weeks and days Hours, minutes and seconds Convert		**Time** convert conversion **Shape** classify nonagon / nonagons decagon / decagons isosceles

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	Addition and Subtraction Add and subtract 1s, 10s, 100s and 1,000s Add up to two 4-digit numbers - no exchange Add two 4-digit numbers - one exchange Add two 4-digit numbers– more than one exchange Subtract two 4-digit numbers - no exchange Subtract two 4-digit numbers - one exchange Subtract two 4-digit numbers – more than one exchange Efficient subtraction Estimate answers Checking strategies **Area** What is area? Counting squares Make shapes Compare area **Multiplication and Division** Multiples of 3 Multiply and divide by 6 6 times-table and division facts Multiply and divide by 9 9 times-table and division facts The 3, 6 and 9 times-tables Multiply and divide by 7 7 times-table and division facts 11 times-table and division facts 12 times-table and division facts Multiply by 1 and 0 Divide by 1 and itself Multiply three numbers	**Addition and Subtraction** operation / operations methods factor factor pairs derive distributive law	**Length and Perimeter** Measure in kilometres and metres Equivalent lengths (kilometres and metres) Perimeter on a grid Perimeter of a rectangle Perimeter of rectilinear shapes Find missing lengths in rectilinear shapes Calculate the perimeter of rectilinear shapes Perimeter of regular polygons Perimeter of polygons **Fractions** Understand the whole Count beyond 1 Partition a mixed number Number lines with mixed numbers Compare and order mixed numbers Understand improper fractions Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers Equivalent fractions on a number line Equivalent fraction families Add two or more fractions Add fractions and mixed numbers Subtract two fractions Subtract from whole amounts Subtract from mixed numbers **Decimals (A)** Tenths as fractions Tenths as decimals Tenths on a place value chart Tenths on a number line Divide a 1-digit number by 10 Divide a 2-digit number by 10 Hundredths as fractions Hundredths as decimals Hundredths on a place value chart Divide a 1 or 2-digit number by 100	**Length and Perimeter** rectilinear figure area dimensions kilometre / km **Fractions** hundredths decimal equivalents decimal places decimal point proportion convert proper fractions improper fractions	between analogue and digital times Convert to the 24 hour clock Convert from the 24 hour clock **Shape** Understand angles as turns Identify angles Compare and order angles Triangles Quadrilaterals Polygons Lines of symmetry Complete a symmetric figure **Statistics** Interpret charts Comparison, sum and difference Interpret line graphs Draw line graphs **Position and Direction** Describe position using coordinates Plot coordinates Draw 2-D shapes on a grid Translate on a grid Describe translation on a grid	scalene equilateral parallelogram / parallelograms trapezium / trapeziums protractor adjacent regular irregular rhombus / rhombuses geometric shapes internal angle congruent **Statistics** label graph time graph x-axis y-axis line graph inferring variable **Position and Direction** co-ordinates pairs of coordinates/ coordinate pairs first quadrant plot grid translate translation axis / axes scale label x-axis

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								y-axis
Year Five	Unit outcome			Unit Outcome			Unit Outcome	
	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
	Place Value Roman numerals to 1,000 Numbers to 10,000 Numbers to 100,000 Numbers to 1,000,000 Read and write numbers to 1,000,000 Powers of 10 10/100/1,000/10,000/100,000 more or less Partition numbers to 1,000,000 Number line to 1,000,000 Compare and order numbers to 100,000 Compare and order numbers to 1,000,000 Round to the nearest 10, 100 or 1,000 Round within 100,000 Round within 1,000,000 **Addition and Subtraction** Mental strategies Add whole numbers with more than four digits Subtract whole numbers with more than four digits Round to check answers Inverse operations (addition and subtraction) Multi-step addition and subtraction problems Compare calculations Find missing numbers **Multiplication and Division (A)** Multiples Common multiples Factors Common factors Prime numbers Square numbers Cube numbers Multiply by 10, 100 and		**Place Value** ten thousand hundred thousand millions Roman numerals (up to 1000 / M) power / powers of prime number complement composite (non-prime) square number square / squared / (d)² cube number cube / cubed / (d)³ integer nearest million nearest hundred thousand linear sequence equivalence **Multiplication and Division** prime factor common factor short division long multiplication	**Multiplication and Division (B)** Multiply up to a 4-digit number by a 1-digit number Multiply a 2-digit number by a 2-digit number (area model) Multiply a 2-digit number by a 2-digit number Multiply a 3-digit number by a 2-digit number Multiply a 4-digit number by a 2-digit number Solve problems with multiplication Short division Divide a 4-digit number by a 1-digit number Divide with remainders Efficient division Solve problems with multiplication and division **Fractions (B)** Multiply a unit fraction by an integer Multiply a non-unit fraction by an integer Multiply a mixed number by an integer Calculate a fraction of a quantity Fraction of an amount Find the whole Use fractions as operators **Decimals and Percentages** Decimals up to 2 decimal places Equivalent fractions and decimals (tenths) Equivalent fractions and decimals (hundredths) Equivalent fractions and decimals Thousandths as fractions Thousandths as decimals Thousandths on a place value chart Order and compare decimals (same number of decimal places) Order and compare any decimals with up to 3 decimal		**Fractions, Decimals and Percentages** mixed numbers thousandths per cent / % percentages **Statistics** timetables two-way tables axis pie chart	**Shape** Understand and use degrees Classify angles Estimate angles Measure angles up to 180° Draw lines and angles accurately Calculate angles around a point Calculate angles on a straight line Lengths and angles in shapes Regular and irregular polygons 3-D shapes **Position and Direction** Read and plot coordinates Problem solving with coordinates, Translation, Translation with coordinates Lines of symmetry Reflection in horizontal and vertical lines **Decimals** Use known facts to add and subtract decimals within 1 Complements to 1 Add and subtract decimals across 1 Add decimals with the same number of decimal places Subtract decimals with the same number of decimal places Add decimals with different numbers of decimal places Subtract decimals with different numbers of decimal places Efficient strategies for adding and subtracting decimals Decimal sequences Multiply by 10, 100 and 1,000 Divide by 10, 100 and 1,000 Multiply and divide decimals - missing values		**Shape** diagonal point reflection straight line (180º) one whole turn (360º) reflex angle regular polygon irregular polygon angles around a point missing angle diagonal net **Position and Direction** x-axis y-axis

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	1,000 Divide by 10, 100 and 1,000 Multiples of 10, 100 and 1,000 **Fractions** Find fractions equivalent to a unit fraction Find fractions equivalent to a non-unit fraction Recognise equivalent fractions Convert improper fractions to mixed numbers Convert mixed numbers to improper fractions Compare fractions less than 1 Order fractions less than 1 Compare and order fractions greater than 1 Add and subtract fractions with the same denominator Add fractions within 1 Add fractions with total greater than 1 Add to a mixed number Add two mixed numbers Subtract fractions Subtract from a mixed number Subtract from a mixed number - breaking the whole Subtract two mixed numbers	dividend divisor	places Round to the nearest whole number Round to 1 decimal place Understand percentages Percentages as fractions Percentages as decimals Equivalent fractions, decimals and percentages **Perimeter and Area** Perimeter of rectangles Perimeter of rectilinear shapes Perimeter of polygons Area of rectangles Area of compound shapes Estimate area **Statistics** Draw line graphs Read and interpret line graphs Read and interpret tables Two-way tables Read and interpret timetables		**Negative Numbers** Understand negative numbers Count through zero in 1s Count through zero in multiples Compare and order negative numbers Find the difference **Converting Units** Kilograms and kilometres Millimetres and millilitres Convert units of length Convert between metric and imperial units Convert units of time Calculate with timetables **Volume** Cubic centimetres Compare volume Estimate volume Estimate capacity	**Converting Units** pound / lb composite metric units Imperial units inch / inches / in foot / feet / ft yard mile centimetre squared (cm^2) metre squared (m^2) compound shape **Volume** pint / pt centimetres cubed (cm^3) metres cubed (m^3)
Year Six	Unit outcome			Unit Outcome			Unit Outcome		
	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary	Knowledge	Skills	Vocabulary
	Place Value Numbers to 1,000,000 Numbers to 10,000,000 Read and write numbers to 10,000,000 Powers of 10 Number line to 10,000,000 Compare and order any integers		**Place Value** millions ten million interval multi-digit	**Ratio** Add or multiply? Using ratio language Introduction to the ratio symbol Ratio and fractions Scale drawing Using scale factors Similar		**Ratio** times as many per for every relative size scale factor	**Shape** Measure and classify angles Calculate angles Vertically opposite angles Angles in a triangle Angles in a triangle – special cases Angles in a triangle – missing angles Angles in		**Shape** dissect / dissection net radius diameter

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Redbourn Primary School

Sequence of teaching overview in Maths

	Round any integers Negative numbers **Addition, Subtraction, Multiplication and Division** Add and subtract integers Common factors Common multiples Rules of divisibility Primes to 100 Square and cube numbers Multiply up to a 4-digit number by a 2-digit number Solve problems with multiplication Short division Division using factors Introduction to long division Long division with remainders Solve problems with division Solve multi-step problems Order of operations Mental calculations and estimation Reason from known facts **Fractions (A)** Equivalent fractions and simplifying Equivalent fractions on a number line Compare and order (denominator) Compare and order (numerator) Add and subtract simple fractions Add and subtract any two fractions Add mixed numbers Subtract mixed numbers Multi-step problems **Fractions (B)** Multiply fractions by integers Multiply fractions by fractions Divide a fraction by an integer Divide any fraction by an integer Mixed questions with fractions Fraction of an amount Fraction of an amount - find the whole **Converting Units**	**Addition, Subtraction, Multiplication and Division** long division common multiples order of operations brackets abstract variables BIDMAS **Fractions** simplify degrees of accuracy **Converting Units**	shapes Ratio problems Proportion problems Recipes **Algebra** 1-step function machines 2-step function machines Form expressions Substitution Formulae Form equations Solve 1-step equations Solve 2-step equations Find pairs of values Solve problems with two unknowns **Decimals** Place value within 1 Place value – integers and decimals Round decimals Add and subtract decimals Multiply by 10, 100 and 1,000 Divide by 10, 100 and 1,000 Multiply decimals by integers Divide decimals by integers Multiply and divide decimals in context **Fractions, Decimals and Percentages** Decimal and fraction equivalents Fraction as division Understand percentages Fractions to percentages Equivalent fractions, decimals and percentages Order fractions, decimals and percentages Percentage of an amount – one step Percentage of an amount – multi-step Percentages – missing values **Perimeter, Area and Volume** Shapes – same area Area and perimeter Area of a triangle – counting squares Area of a right-angled triangle Area of any triangle Area of a parallelogram Volume – counting cubes Volume of a cuboid	proportion ratio (a:b) comparison scaling scale factor part to part part to whole **Algebra** symbol letter sequence algebraic / algebraically equation unknown variable constant generalise expression rule combinations **Perimeter, Area and Volume** cubed (mm^3) centimetres cubed (cm^3) metres cubed (m^3) gallons **Statistics** pie chart mean average data set variable conversion graph	quadrilaterals Angles in polygons Circles Draw shapes accurately Nets of 3-D shapes **Position and Direction** The first quadrant Read and plot points in four quadrants Solve problems with coordinates Translations Reflections	circumference vertically opposite complementary angles dimensions composite exterior angle intersect **Position and Direction** co-ordinate plane four quadrants

Sequence of teaching overview in Maths

	Metric measures Convert metric measures Calculate with metric measures Miles and kilometres Imperial measures	stones ounces millimetres	**Statistics** Line graphs Dual bar charts Read and interpret pie charts Pie charts with percentages Draw pie charts The mean	convert		