Mathematics Mastery Curriculum Map: Reception

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Early mathematical experiences				**Pattern and early number**		**Numbers within 6**		**Addition and subtraction within 6**	**Measures**	**Shape and sorting**
• Classifying objects based on one attribute • Matching equal and unequal sets • Comparing objects and sets • Ordering objects and sets				• Recognise, describe, copy and extend colour and size patterns • Count and represent the numbers 1 to 3 • Estimate and check by counting		• Count up to six objects. • One more or one fewer • Order numbers 1 – 6 • Conservation of numbers within six		• Explore zero • Explore addition and subtraction	• Estimate, order compare, discuss and explore capacity, weight and lengths	• Describe, and sort 3-D shapes • Describe position accurately

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 8	Week 9
Numbers within 10		**Calendar and time**	**Addition and subtraction within 10**	**Grouping and sharing**		**Number patterns within 15**		**Doubling and halving**	**Shape and pattern**
• Count up to ten objects • Represent, order and explore numbers to ten • One more or fewer, one greater or less		• Days of the week, seasons • Sequence daily events	• Explore addition as counting on and subtraction as taking away	• Counting and sharing in equal groups • Grouping into fives and tens • Relationship between grouping and sharing		• Count up to 15 objects and recognise different representations • Order and explore number patterns to 15 • One more or fewer		• Doubling and halving • Relationship between doubling and halving	• Describe and sort 2-D and 3-D shapes • Recognise, complete and create patterns

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Securing addition and subtraction facts		**Number patterns within 20**		**Number patterns beyond 20**	**Money**	**Measures**		**Exploration of patterns within number**	
• Commutativity • Explore addition and subtraction • Compare two amounts		• Count up to 10 and beyond with objects • Represent, compare and explore numbers to 20 • One more or fewer		• One more one less • Estimate and count • Grouping and sharing	• Coin recognition and values • Combinations to total 20p • Change from 10p	• Describe capacities • Compare volumes • Compare weights • Estimate, compare and order lengths		• Explore numbers and strategies • Recognise and extend patterns • Apply number, shape and measures knowledge • Count forwards and backwards	

The Dimensions of Depth - Conceptual Understanding, Language and Communication and Mathematical Thinking - underpin all aspects of the curriculum; problem solving is at the heart and is embedded in all units.

Mathematics Mastery Curriculum Map: Year 1

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Numbers to 10		**Addition and subtraction within 10**		**Shape and patterns**		**Numbers to 20**		**Addition and subtraction within 20**	
• Represent, compare and explore numbers within 10 • One more and one less • Doubling and halving		• Represent and explain addition and subtraction • Commutativity • Addition and subtraction facts		• Identify, describe, sort and classify 2-D and 3-D shapes • Investigate repeating patterns • Use and follow instructional and positional language		• Identify, represent, compare and order numbers to 20 • Doubling and halving • One more and one less		• Represent and explain addition and subtraction strategies including 'Make Ten' • Use known facts to add and subtract	

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Time		**Exploring calculation strategies within 20**	**Numbers to 50**		**Addition and subtraction within 20**		**Fractions**	**Measures: Length and mass**	
• Read, write and tell the time to o'clock and half past on analogue clock • Sequencing daily activities • Whole and half turns linked to time		• Model, explain and choose addition and subtraction strategies	• 2-digit numbers – represent, sequence, explore, compare. • Count in 2s, 5s and 10s • Describe and complete number patterns		• Illustrate, explain and link addition and subtraction with equations • Apply 'Make Ten' strategy • Use language to quantify and compare difference		• Identify $\frac{1}{2}$ and $\frac{1}{4}$ of a shape or object • Find $\frac{1}{2}$ and $\frac{1}{4}$ of a quantity	• Compare and measure lengths and mass using cm and kg • Doubling and halving	

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Numbers 50 to 100 and beyond		**Addition and subtraction**		**Money**		**Multiplication and division**		**Measures: Capacity and volume**	
• Read, write, represent, compare and order numbers to 100 • One more / fewer, ten more / fewer • Identify number patterns		• Explore addition and subtraction involving 2-digit numbers and ones • Represent and explain addition and subtraction with regrouping • Investigate number bonds within 20		• Name coins and notes and understand their value • Represent the same value using different coins • Find change		• Share equally into groups • Doubling • Link halving to fractions • Add equal groups • Explore arrays		• Compare capacities, volumes and lengths • Explore litres • Apply understanding of fractions to capacity	

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Mathematics Mastery Curriculum Map: Year 2

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Numbers within 100		**Addition and subtraction of 2-digit numbers**		**Addition and subtraction word problems**		**Measures: Length**		**Graphs**	**Multiplication and division: 2, 5, and 10**		
• Read, write, represent, partition, compare and order numbers to 100 • Explore patterns including, odds and evens, tens and ones		• Apply number bonds to add and subtract • Represent and explain addition and subtraction of two 2-digit numbers. • Add three 1-digit numbers		• Introduction to bar models as a representation • Create, label and sketch bar models		• Draw and measure lengths in centimetres • Use <, > and = to compare and order lengths in metres and centimetres		• Represent and interpret: pictograms, block diagrams, tables and tally charts.	• Calculate the times tables of 2, 5, and 10 by skip counting • Relate the 2 times table to doubling • Explore representations of multiplication and division • Commutativity		

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Time		**Fractions**		**Addition and subtraction of 2-digit numbers**		**Money**		**Face, shapes and patterns; lines and turns**		
• Tell the time on an analogue clock: quarter past, quarter to and five minute intervals • Calculate durations of time in minutes and seconds • Sequence daily events • Minutes in an hour and hours in a day		• Part-whole relationships • Fractions as part of a whole or a whole set • Relate to division • Equivalent fractions		• Illustrate, represent and explain addition and subtraction involving regrouping including 'Make Ten', 'Round and adjust' and near doubles strategies		• Recognise coins and notes • Use £ and p accurately • Add and subtract amounts • Calculate change		• Explore, sort and describe 2-D shapes • Lines of symmetry in 2-D shapes • Identify 2-D shapes on 3-D shapes • Compare and sort 2-D and 3-D shapes • Use language to describe position, direction and rotation to follow a route		

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Numbers within 1000	**Measures: Capacity and volume**		**Measures: Mass**	**Exploring calculation strategies**		**Multiplication and division: 3 and 4**		
• Represent in different ways • Compare using symbols • Read scales	• Read and measure temperature • Estimate, measure and understand litres and millilitres • Compare and order capacities		• Weigh and compare masses in kilograms and grams	• Apply addition and subtraction strategies to solve equations • Illustrate and explain addition and subtraction using column method		• Multiplication and division facts for 3 and 4 • Relate 4 times table to doubling the 2 times tables • Describe, interpret and represent using arrays and bar models • Recognise inverse relationship		

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Mathematics Mastery Curriculum Map: Year 3

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Number sense and exploring calculation strategies			**Place value**		**Graphs**	**Addition and subtraction**			**Length and perimeter**	
• Read, write, order and compare numbers to 100 • Calculate mentally using known facts, round and adjust, near doubles, adding on to find the difference • Derive new facts from a known fact			• Read, write, represent, partition, order and compare 3-digit numbers • Find 10 and 100 more or less • Round to the nearest multiple of 10 and 100		• Collect, interpret and present data using charts and tables	• Develop and use a range of mental calculation strategies • Illustrate and explain formal written methods – column method			• Measure, draw and compare lengths • Add and subtract lengths • Calculate perimeter	

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Multiplication and division		**Deriving multiplication and division facts**			**Time**		**Fractions**		
• Multiplication and division facts for 2, 3, 4, 5, 6, 8 and 10 • Multiplicative structures: equal groups/parts, change and comparison, correspondence problems • Relationships: commutativity and inverse		• Multiply and divide by 10 and 100 • Multiply a 2-digit number by 2, 3, 4, 5 and corresponding division situations • Divide 2-digit by a 1-digit			• Tell, record, write and order the time analogue and digital • 12-hour, a.m., p.m. • Measure, calculate and compare durations		• Part-whole relationships • Fractions as part of a whole or a whole set and as a number • Add, subtract, compare and order fractions		

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Angles and shape			**Measures**			**Securing multiplication and division**	**Exploring calculation strategies and place value**	
• Identify angles including right angles and recognise as a quarter of a turn • Identify and draw parallel and perpendicular lines • Draw/make, classify and compare 2-D and 3-D shapes • Measure the perimeter			• Read scales with different intervals when measuring mass and volume • Weigh and compare masses and capacities with mixed units • Estimate mass and capacity			• Recall and use multiplication and division facts for 6 and 8 times table	• Add and subtract mentally • Find 10, 100 and 1000 more or less • Order and compare beyond 1000 • Round numbers	

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Mathematics Mastery Curriculum Map: Year 4

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Reasoning with large numbers		**Addition and subtraction**			**Multiplication and division**			**Discrete and continuous data**	
• 4-digit place value. Read, write, represent, order and compare • Find 10, 100 or 1000 more or less • Round numbers to the nearest 10, 100 or 1000		• Select appropriate strategies to add and subtract • Illustrate and explain appropriate addition and subtraction strategies including column method with regrouping			• Distributive property including multiplying three 1-digit numbers • Mental multiplication and division strategies using place value and known and derived facts • Short multiplication and division			• Read, interpret and construct pictograms, bar charts and time graphs • Compare tables, pictograms and bar charts	

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Securing multiplication facts	**Fractions**				**Time**	**Decimals**			**Area and perimeter**	
• Identify and explore patterns in multiplication tables including 7 and 9	• Explore different interpretations and representations of fractions • Equivalent fractions • Represent fractions greater than one as mixed number and improper fractions • Add and subtract fractions with the same denominator including fractions greater than one				• Analogue to digital, 12-hour and 24-hour • Convert between units of time	• Decimal equivalents to tenths, quarters and halves • Compare and order numbers with same number of decimal places • Multiply and divide by 10 and 100 including decimals			• Perimeter of rectangles and rectilinear shapes • Area of rectangles and rectilinear shapes • Investigate area and perimeter	

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Solving measures and money problems			**Shape and symmetry**			**Position and direction**	**Reasoning with pattern and sequences**		**3-D shape**
• Convert units of measure • Select appropriate units to measure • Use strategies to investigate problems: trial and improvement, organising using lists and tables, working systematically			• Classify, compare and order angles • Compare and classify 2-D shapes • Identify lines of symmetry			• Describe and plot using coordinates • Describe translations	• Roman numerals up to 100 • Place value of other number systems • Number sequences and patterns		• Use understanding of 3-D shapes • Identify 3-D shapes from 2-D representations

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Mathematics Mastery Curriculum Map: Year 5

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Reasoning with large whole integers		**Integer addition and subtraction**		**Line graphs and timetables**		**Multiplication and division**			**Perimeter and area**
• Read, write, order and compare numbers up to one million • Round numbers within one million to the nearest multiple of powers of ten • Read Roman numerals up to M		• Use rounding to estimate • Use a range of mental calculation strategies to add and subtract integers • Illustrate and explain the written method of column addition and subtraction • Select efficient calculation strategies		• Complete, read and interpret data presented in line graphs • Read and interpret timetables including calculating intervals		• Identify multiples and factors • Investigate prime numbers • Multiply and divide by 10, 100 and 1000 (integers) • Derived facts • Illustrate and explain formal multiplication and division strategies such as short and long • Use a range of mental calculation strategies			• Investigate area and perimeter of rectilinear shapes • Estimate area of non-rectilinear shapes

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Fractions and decimals			**Angles**		**Fractions and percentages**			**Transformations**	
• Read, write, order and compare decimals • Round decimals to the nearest whole number • Represent, identify, name, write, order and compare fractions (including improper and mixed numbers) • Calculate fractions of amounts			• Classify, compare and order angles • Measure a draw angles with a protractor • Understand and use angle facts to calculate missing angles		• Add, subtract fractions with denominators that are multiples of the same number • Multiply fractions (and mixed numbers) by a whole number • Explore percentage, decimal, fractions equivalence			• Coordinates in all four quadrants • Translation and reflection • Calculate intervals across zero as a context for negative numbers	

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Converting units of measure		**Calculating with whole numbers and decimals**			**2-D and 3-D shape**		**Volume**	**Problem solving**	
• Convert between metric units of length, mass and capacity and units of time • Know and use approximate conversion between imperial and metric		• Mental strategies to add and subtract involving decimals • Formal written strategies to add, subtract and multiply involving decimals • Multiply and divide by 10, 100 and 1000 involving decimals • Derive multiplication facts involving decimals			• Classify 2-D shapes and reason about regular and irregular polygons • Properties of diagonals of quadrilaterals • Classify 3-D shapes • 2-D representations of 3-D shapes.		• Use cube numbers and notation • Estimate volume • Convert units of volume	• Negative numbers and calculating intervals across zero • Calculating the mean • Interpret remainders • Investigate numbers: consecutive, palindromic, multiples	

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Mathematics Mastery Curriculum Map: Year 6

The first two units need to be taught before any other units as these cover place value and the four operations and ensure firm foundations for the rest of the learning.

The remaining units can be taught in any order with the following caveats:

- The first five lessons of the first Fractions unit should be taught prior to learning on calculating with fractions.
- The Proportion problems unit should only be taught after the units on fractions, decimals and percentages.

1) Integers and decimals (10 lessons)

- Represent, read, write, order and compare numbers up to ten million
- Round numbers, make estimates and use this to solve problems in context
- Solve multi-step problems involving addition and subtraction

2) Multiplication and division (15 lessons)

- Identify and use properties of number, focusing on primes
- Multiply larger integers and decimal numbers using a range of strategies
- Divide integers by 1-digit and 2-digit numbers representing remainders appropriately
- Illustrate and explain formal multiplication and division strategies

3) Calculation problems (10 lessons)

- Understand the use of brackets
- Use knowledge of the order of operations to carry out calculations
- Generate and describe linear number sequences
- Express missing number problems algebraically
- Solve equations with unknown values

4) Fractions (10 lessons)

- Deepen understanding of equivalence
- Order, simplify and compare fractions, including those greater than one
- Recall equivalence between common fractions and decimals
- Find decimal quotients using short division
- Add and subtract fractions

5) Missing angles and length (5 lessons)

- Compare and classify a range of geometric shapes
- Use angle facts to find unknown angles

6) Coordinates and shapes (10 lessons)

- Draw a range of geometric shapes using given dimensions and angles
- Describe, draw, translate and reflect shapes on a co-ordinate plane
- Recognise and construct 3-D shapes
- Name and illustrate parts of a circle

7) Fractions (5 lessons)

- Represent multiplication involving fractions
- Multiply two proper fractions
- Divide a fraction by an integer

8) Decimals and measure (15 lessons)

- Use, read, write and convert between standard units of measures; length, mass, time, money and volume as well as imperial units
- Calculate the area of parallelograms and triangles
- Calculate, estimate and compare the volume of cuboids

9) Percentage and statistics (10 lessons)

- Calculate and compare percentages of amounts
- Connect percentages with fractions
- Explore the equivalence of fractions, decimals and percentages
- Calculate the mean
- Construct and interpret lines graphs and pie charts
- Compare pie charts

10) Proportion problems (10 lessons)

- Use fractions to express proportion
- Identify ratio as a relationship between quantities and as a scale factor
- Unequal sharing involving ratio

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