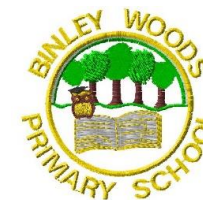


Reception Mastering Number Lessons

R Curriculum	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Maths						
Number Numerical pattern	Group Times Mastering Number Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. Pupils will: • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence;		Group Times Mastering Number Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will: • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games		Group Times Mastering Number Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. Pupils will: • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2 begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek	



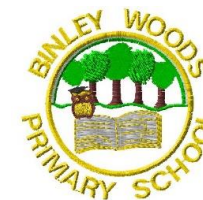
	understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	• join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	
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Reception Maths Meetings

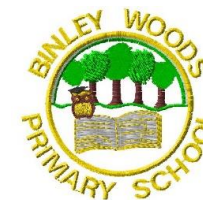
Early mathematical experiences	Pattern and early number	Numbers within 6	Addition and subtraction within 6	Measures	Shape and sorting
• Classifying objects based on one attribute • Matching equal and unequal sets • Comparing objects and sets • Ordering objects and sets	• Recognise, describe, copy and 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 3D shapes • Describe position accurately



Binley Woods Primary School Maths Curriculum Progression Map

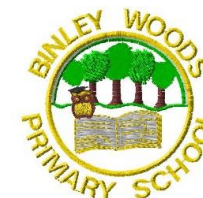


Numbers within 10	Calendar and time	Addition and subtraction within 10	Grouping and sharing	Number patterns within 15	Doubling and halving	Shape and pattern
- Count up to ten objects - Represent, order and explore numbers to ten - One more or fewer, one greater or less	- Days of the week, seasons - Sequence 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
Securing addition and subtraction facts						
Number patterns within 20	Number patterns beyond 20	Money	Measures	Exploration of patterns within number		
- 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		



Year 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Autumn	Shape and patterns				Numbers to 10 & Addition and subtraction within 10		Spring- Numbers to 20		Addition and subtraction within 20	
	• NCETM- part whole relationships. • NCETM Units (Numbers 0-5)		• Identify, describe, sort and classify 2-D and 3-D shapes • Investigate repeating patterns • Use and follow instructional and positional language		• 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, 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
	Exploring calculation strategies within 20		Numbers to 50 & Numbers 50 to 100 and beyond		Addition and subtraction within 20 (comparison)		Fractions		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 -Read, write, represent,		• Illustrate, explain and link addition and subtraction with equations • Apply 'Make Ten' strategy • Use language to quantify and compare difference		$\frac{1}{4}$ Identify $\frac{1}{2}$ and of a shape or object $\frac{1}{2}$ $\frac{1}{4}$ Find and of a quantity		• Read, write and tell the time to o'clock and half past on analogue clock • Sequencing daily activities	
									Measures: Length and mass	
									• Compare and measure lengths and mass using cm and kg • Doubling and halving	

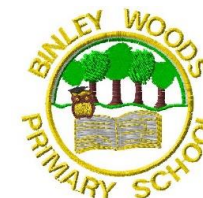


		compare and order numbers to 100 -One more / fewer, ten more / fewer -Identify number patterns			• Whole and half turns linked to time	
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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Summer	Money		Multiplication and division		Measures: Capacity and volume					
	- 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					

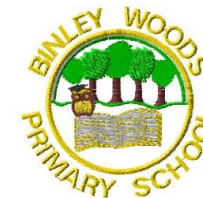


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Year 2

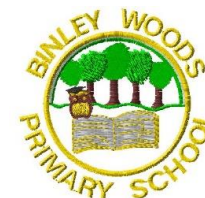
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Numbers within 100		Addition and subtraction of 2-digit numbers		Addition and subtraction word problems		Measures: Length		Graphs (first taught)	Multiplication and division: 2, 5, and 10		
	- Read, write, represent, 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	Week 12
	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			



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Summer	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		



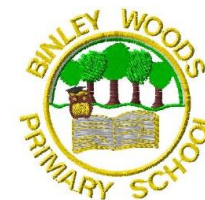
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Year 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Autumn	Number sense and exploring calculation strategies			Place value		Graphs	Addition and subtraction (3 digit numbers)			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	

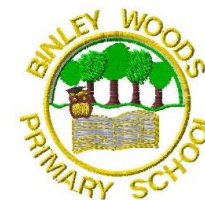
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Spring	Multiplication and division 2,4,8-NEW		Deriving multiplication and division facts			Time		Fractions		
	- Multiplication and division facts for 2, 3, 4, 5, 6, 8 and 10 - Multiplicative structures: equal groups/parts, change and comparison, correspondence problems - Relationships: commutativity and inverse		<i>First introduced to written method</i> - 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		



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Summer	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	

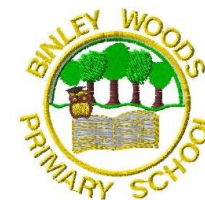


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Year 4

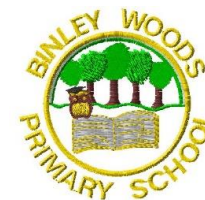
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	
Autumn	Reasoning with large numbers		Addition and subtraction (4 digit numbers)			Multiplication and division (2 and 3-digit by 1 digit number)			Discrete and continuous data		
	• 4-digit place value. Read, write, represent, order 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 3,6,9	Fractions					Time	Decimals (introduced!)		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, 12hour 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		



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Summer	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

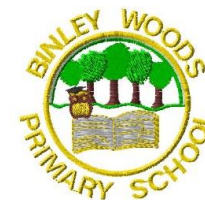


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Year 5

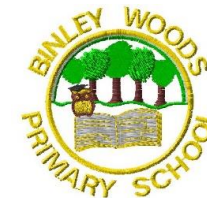
	Week 1		Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Autumn	Reasoning with large whole integers		Integer addition and subtraction (up to 6 digit)		Line graphs and timetables		Multiplication and division (4 digit x 1/2 digit number)			Perimeter and area
	- Read, write, order and compare numbers 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 nonrectilinear 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 and 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	



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Summer	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	



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.



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.

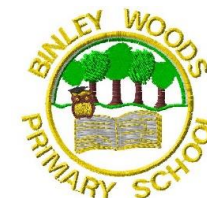
The remaining units can be taught in any order with the following caveats:

- 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)	2) Multiplication and division (15 lessons)	3) Calculation problems (10 lessons)	4) Fractions (10 lessons)	5) Missing angles and length (5 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	• 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	• 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	• 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	• Compare and classify a range of geometric shapes • Use angle facts to find unknown angles





6) Coordinates and shapes (10 lessons)	7) Fractions (5 lessons)	8) Decimals and measure (15 lessons)	9) Percentage and statistics (10 lessons)	10) Proportion problems (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	• Represent multiplication involving fractions • Multiply two proper fractions • Divide a fraction by an integer	• 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	• 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	• 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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Mathematics
Mastery

Binley Woods Primary School Maths Curriculum Progression Map



KEY

Number and Place Value

Addition and Subtraction

Multiplication and Division

Fractions

Measurement

Geometry – properties of shapes

Geometry – position and direction

Statistics