



Maths Scheme of Work 2022-2023

EYFS

EYFS					
Autumn 1	Early Mathematical Experiences (5 lessons)	Pattern and Early Number (10 lessons)		Numbers within 5 (10 lessons)	Consolidation (5 lessons)
Autumn 2	Addition and Subtraction within 5 (5 lessons) Consolidation (5 lessons)	Measures (5 lessons)	Shape and sorting (3D) (5 lessons)	Calendar and time (5 lessons)	
Spring 1	Numbers within 10 (10 lessons)		Addition and Subtraction within 10 (5 lessons)	Numbers within 15 (10 lessons)	
Spring 2	Shape and pattern (2D) (5 lessons)	Doubling and halving to 10 (5 lessons)	Grouping and sharing (10 lessons)	Numbers within 20 (5 lessons)	Consolidation (5 lessons)
Summer 1	Doubling and halving to 20 (10 lessons - continued)			Addition and Subtraction (10 lessons)	Money (5 lessons)
Summer 2	Measures (5 lessons)	Depth of numbers within 20 (10 lessons)	Numbers beyond 20 (10 lessons)	Problem solving/Investigation Week (5 lessons)	



Maths Scheme of Work 2022-2023

EYFS

Term and Overall Unit Focus:	Unit of Work:	Unit overview:	Skills:	Key vocabulary/Star words:	What this looks like in practice (topic related ideas):	Sentence Stems:
Autumn 1	Early mathematical experiences	<ul style="list-style-type: none"> Classifying objects based on one element Matching equal and unequal sets Comparing and ordering objects and sets 	<ul style="list-style-type: none"> counting objects using one-to-one correspondence up to 5 using some number names and number language match equal sets using one-to-one correspondence match unequal sets using one-to-one correspondence compare objects according to size compare sets without counting order objects according to length or height order sets without counting Count objects, actions and sounds 	Match Order Compare	<ul style="list-style-type: none"> - Matching farm animals to numbers. - Comparing numbers of animals in the pen. - Comparing the size of different animals. - Putting animals in size order. - Using cubes to measure height of animals. 	<p>_____ is the same as _____.</p> <p>The _____ is <i>greater/smaller</i> than the _____.</p>
	Pattern and early number	<ul style="list-style-type: none"> Recognise, describe, copy and extend colour and size patterns Count and represent numbers to 3 	<ul style="list-style-type: none"> recite numbers past 5. count 1, 2 or 3 objects, images or sounds reliably recognise if a number of objects is the same or different (working with numbers 1, 2 and 3) develop fast recognition of up to 3 objects, without having to count them individually (subitising). recognise the numerals 1, 2 and 3 create representations for numbers 1, 2 and 3 	Recognise, create, same, different, count, pattern, colour, size, big, small, long, short, next, before, extend, count, one, two, how many, same, different	<ul style="list-style-type: none"> - Creating patterns on a farm e.g. flowers, fences, animals. - Comparing characteristics of animals, e.g. which animal has the most spots or what flower has the least petals? - Spotting shapes in Farm themed settings. 	



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		<ul style="list-style-type: none"> ● Estimate and check by counting 	<ul style="list-style-type: none"> ● talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. ● extend and create ABAB patterns – stick, leaf, stick, leaf. ● notice and correct an error in a repeating pattern. ● begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' 			
	Numbers within 5	<ul style="list-style-type: none"> ● Count up to six objects ● One more and one fewer ● Order numbers from 1-6 	<ul style="list-style-type: none"> ● say which number is one more or one less than a given number ● estimate a number of objects and check by counting ● recognise the numerals 1-5 ● count reliably with numbers as well as objects from 1 to 5 and understanding when counting that the last number is the total amount ● create representations for numbers 1- 5 ● place numbers 1- 5 in order ● count an amount up to 5 and match it to the corresponding numeral ● use a range of their own marks and signs which they ascribe mathematical meanings ● subitise within 5 (without counting) ● recognise that each counting number is one more than the one before ● say which number from 1-5 is one more or one less than a given number 	Explore, count, estimate, place value, recognise, One, two, three, four, same, different, more, fewer, first, next, before, after, more, fewer, greater, less,	<ul style="list-style-type: none"> - Placing a number of farm animals on ten frames and counting those animals. - Arrange farm related ideas for children to count and compare. 	<p>The number before a given number is one less.</p> <p>The number after a given number is one more.</p> <p>_____ is one more than _____.</p> <p>_____ is one less than _____.</p>



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Autumn 2	Addition and subtraction within 5	<ul style="list-style-type: none"> ● Explore zero ● Explore addition and subtraction ● 	<ul style="list-style-type: none"> ● understand the composition of numbers up to 5 ● add and subtract two single-digit numbers ● estimate a number of objects and check by counting up to 5 ● introduce the concept of 0 as the empty set ● represent and use number bonds within 5 ● use quantities and objects to add and subtract two single-digit numbers ● solve real world mathematical problems up to 5 	Zero, nothing, none, part, whole, plus, altogether, is equal to, part, whole, plus, is equal to.	- Making London or Christmas related addition and subtraction stories.	<p>___ is the whole; ___ is a part and ___ is a part.</p> <p>The whole is ___ and one part is ___ so the other part must be ___.</p> <p>I know ___ plus ___ is equal to ___.</p> <p>I know ___ subtract ___ is equal to ___.</p>
	Measures	<ul style="list-style-type: none"> ● Explore capacity, weight and length ● Estimate capacity, length and weight ● Compare capacity, weight and length 	<ul style="list-style-type: none"> ● use everyday language to talk about size, weight, capacity ● estimate, measure, weigh and compare and order objects ● compare objects and quantities ● to accurately understand the difference between tall, small, short, long, light and heavy. ● solve size problems related to measures 	Big, bigger, biggest, small, smaller, smallest, full, empty, half full, heavy, heavier, heaviest, light, lighter, lightest, balance, long, longer, longest, short, shorter, shortest, same length.	- Measuring how tall buildings in London are, how heavy they are.	<p>The ___ is the same length as the ___.</p> <p>The ___ is the same length as the ___.</p> <p>The ___ is heavier than the ___.</p> <p>The ___ is lighter than the ___.</p>



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	Shape and sorting	<ul style="list-style-type: none"> Describe 3D shapes Sort 3D shapes Describing position accurately 	<ul style="list-style-type: none"> explore characteristics of everyday objects and shapes and use mathematical language to describe them use common shape names and show an interest in shape and space by playing with shapes by sustained construction activity e.g. flat surface for a building and triangular shape for a roof. explore characteristics of everyday objects and shapes (focusing on 3-D shapes) use positional language classify and sort (similarities and differences) everyday objects 	Vertex, vertices, face, edge, over, under, above, below, top, bottom, side, on, in, in front, behind, front, back, beside, next to, between,	<ul style="list-style-type: none"> Link to Christmas decorations or spotting shapes in landscapes. 	<p>I know this is a ____ because ____.</p> <p>This shape has ____.</p> <p>A square has ____.</p> <p>The object is ____.</p>
	Calendar and time	<ul style="list-style-type: none"> Days of the week Seasons Sequence daily events 	<ul style="list-style-type: none"> use everyday language to talk about time, days of the week and months of the year measures short periods of time in simple ways orders and sequences events using everyday language related to time use ordinal numbers: 1st, 2nd...last use timers and calendars to measure time and experiences 	Time, season, month, day, calendar, week, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, First, next, last, before, after, morning, afternoon, evening, night-time, longer, shorter.	<ul style="list-style-type: none"> Activities related to the topic e.g. Christmas Day is tomorrow morning, Santa Claus visits the houses at night and then delivers the presents. 	
Spring 1	Numbers within 10	<ul style="list-style-type: none"> Count up to ten objects Represent, order and explore numbers to ten 	<ul style="list-style-type: none"> say which number is one more or one less than a given number estimate a number of objects and check by counting counting forwards and backwards reliably with numbers from 1 to 10 develop an understanding of zero create representations for numbers 0-10 place numbers 0-10 in order 	One, two, three, four, five, six, seven, same, different, altogether, one more, one greater, one fewer, one less, numbers names 1-10, order, greater, greatest, more, less,	<ul style="list-style-type: none"> Activities related to the topic e.g. explorers, festivals. 	<p>The number before a given number is one less.</p> <p>The number after a given number is one more.</p>



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		<ul style="list-style-type: none"> ● One more or fewer, one greater or less 	<ul style="list-style-type: none"> ● recognise the numerals 0-10 ● match the numeral with a group of items to show how many there are up to 10 ● use ordinal numbers: 1st, 2nd...last ● understand the conservation of numbers ● Counts out up to 10 objects from a larger group 	<p>increasing, decreasing, First, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, last, next, before, after, between.</p>		<p>___ is one more than ____.</p> <p>_____ is one less than ____.</p> <p>The number ____ is made up of ____.</p>
Addition and subtraction within 10	<ul style="list-style-type: none"> ● Explore addition as counting on and subtraction as taking away 	<ul style="list-style-type: none"> ● estimate a number of objects and check by counting up to 10 ● adds one and subtracts one with numbers to 10 ● add and subtract two single-digit numbers and count on or back to find the answer ● use quantities and objects to add and subtract two single-digit numbers ● recall some number bonds to 10 ● Use number names, symbols (+ or -), tallies when comparing numbers and exploring mathematical problems ● shows interest in large numbers ● use a range of representations to model adding and subtracting (part-whole model, ten frame, number line, bead string) ● show awareness that numbers are made up of smaller numbers, exploring partitioning in different ways with a wide range of objects ● subitise larger numbers by subitising smaller groups within the number e.g. sees six raisins on a plate as three and three 	<p>First, then, now, plus, is equal to, take away.</p>		<p>___ is the whole; ___ is a part and ___ is a part.</p> <p>The whole is ___ and one part is ___ so the other part must be ____.</p> <p>I know ___ plus ___ is equal to ____.</p> <p>I know ___ subtract ___ is equal to ____.</p>	



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	<p>Numbers within 15</p>	<ul style="list-style-type: none"> Count up to 15 objects and recognise different representations Order and explore numbers to 15 One more or fewer 	<ul style="list-style-type: none"> say which number is one more or one less than a given number estimate a number of objects and check by counting count reliably with numbers from 0 to 15 Create representations for numbers 0-15 place numbers from 0-15 in order considering equal and unequal groups 	<p>Number, number names 0 to 15, order, more, fewer, greater, less, same, equal, number line, one more, one fewer, between, before, after, bead string, guess, check, share, ordinal, 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, first, last, order, sequence, groups of.</p>		<p>___ is one more than ____.</p> <p>___ is one less than ____.</p> <p>___ is unequal.</p> <p>___ is equal.</p>
<p>Spring 2</p>	<p>Shape and pattern</p>	<ul style="list-style-type: none"> Describe and sort 2-D and 3-D shapes Recognise, complete and create patterns 	<ul style="list-style-type: none"> use informal language as well as mathematical terms to describe and name shapes talk about properties of shapes explore characteristics of everyday objects and shapes and use mathematical language to describe them explore characteristics of everyday objects and shapes (focusing on 2-D shapes) classify and sort shapes partitions and combines shapes to make new shapes with 2D and 3D shapes recognise, create, and describe patterns with shapes as well as identifying the pattern rule recognise and create patterns beyond AB patterns and can recognise the unit of repeat 	<p>Side, edge, vertex, vertices, curved, straight, sort, criteria, corner, square, circle, triangle, rectangle, straight, curved, pattern, next, same, different.</p>	<p>- Looking at shapes of buildings around the world e.g. what shapes do they have?</p> <p>- Looking and comparing shapes from different habitats around the world.</p>	<p>A ___ has ____.</p> <p>The difference is ____.</p> <p>The similarity is ____.</p>



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			<ul style="list-style-type: none"> ● use mathematical language to describe size and position 			
Doubling and halving to 10	<ul style="list-style-type: none"> ● Doubling within 10 ● Halving within 10 ● Relationship between doubling and halving 	<ul style="list-style-type: none"> ● solve problems, including doubling, halving, and sharing ● model doubling using a range of representations (CPA) ● model halving using a range of representations (CPA) ● Explore the relationship between doubling ● Explore the relationship between halving 	Double, altogether, how many, count, half, equal, same, part-whole model.	<ul style="list-style-type: none"> - Doubling and halving scenarios related to the topic e.g. doubling 5 wands/halving 10 wizards/sharing them between castles. 	<p>Each _____ has ____ parts.</p> <p>Count in groups of _____.</p> <p>Double ____ is equal to _____.</p> <p>Half of ____ is equal to _____.</p>	
Grouping and sharing	<ul style="list-style-type: none"> ● Counting and sharing in equal groups ● Grouping into fives and tens ● Relationship between grouping and sharing 	<ul style="list-style-type: none"> ● solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups ● explore counting on in steps of 2 from zero ● explore counting on in steps of 5 from zero ● explore counting on in steps of 10 from zero ● share/group a number of objects into 2's, 5's and 10's ● solve practical problems that involve grouping and sharing 	Groups of, each group, altogether, same, different, number, equal groups, same number, pair, groups of two, bead string, each group, altogether, is equal to, equal groups, same number, 0, 10, 20, 30, 40, 50, share, unequal.	<ul style="list-style-type: none"> - Sharing magic wands between wizards. - Skip counting numbers along a castle/skip counting using objects related to magic. -Solving potion related problems. 	<p>This is not a whole group of ____ because only part of the ____ has ____ in.</p> <p>A whole can be split into more than two parts in lots of different ways</p>	
Numbers within 20	<ul style="list-style-type: none"> ● Count up to 10 objects ● Represent, order and explore 	<ul style="list-style-type: none"> ● count reliably with numbers from one to 20 ● create representations for numbers 0-20 ● say which number is one more or one less than a given number ● solve practical problems that involve grouping and sharing 	Number names 0–20, more, fewer, order, one group of ten, numbers within 20, pattern, one more, one greater, one fewer, one less,	<ul style="list-style-type: none"> - Representing numbers related to the topic e.g. 5 wands, 7 wizards. 	<p>_____ is one more than _____.</p> <p>_____ is one less than _____.</p>	



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		<ul style="list-style-type: none"> numbers to 15 One more or fewer 	<ul style="list-style-type: none"> estimate a number of objects and check by counting, considering equal and unequal groups 	between, before, after, groups, first, last, order.		
Summer 1	Doubling and halving to 20	<ul style="list-style-type: none"> Doubling within 20 Halving within 20 Relationship between doubling and halving 	<ul style="list-style-type: none"> solve problems, including doubling, halving and sharing model doubling using a range of representations (CPA) model halving using a range of representations (CPA) Explore the relationship between doubling and halving Explore the relationship between halving 	Double, altogether, how many, count, half, equal, same, part-whole model.	- Doubling and halving scenarios related to the topic e.g. doubling 5 wands/halving 10 wizards/sharing them between castles.	<p>___ is equal.</p> <p>___ is unequal.</p> <p>Double ___ is ___.</p> <p>Half of ___ is ___.</p>
	Addition and subtraction	<ul style="list-style-type: none"> Commutativity Explore addition and subtraction Compare two amounts Relationship between doubling and halving 	<ul style="list-style-type: none"> estimate a number of objects and check by counting up to 20 add and subtract two single-digit numbers and count on or back to find the answer explore the relationship between addition and subtraction solve problems, including doubling, halving and sharing say which number is one more or one less than a given number from 1 - 20 use quantities and objects to add and subtract two single-digit numbers 	Part, whole, plus, altogether, is equal to, First, then, now, subtract, minus, part, whole, is equal to, more, fewer, is equal to, same, different, compare, double, add, half, share between.		<p>___ is the whole; ___ is a part and ___ is a part.</p> <p>___ plus ___ is equal to ___.</p> <p>___ subtract ___ is equal to ___.</p> <p>Each _____ has ___ parts</p> <p>Count in groups of _____.</p>
	Money	<ul style="list-style-type: none"> Coin recognition and values Combinations to total 20p 	<ul style="list-style-type: none"> compare quantities and objects to solve problems use everyday language to talk about money, recognise coins up to 50p and their values compare the value of coins 	1p, 2p, 5p, 10p, 20p, 50p, £1, coins, more, less, money, pence, penny, pennies, much?, altogether, pound,	- Introduce money from around the world – in different countries. - Climate change shops – selling environment friendly items etc.	___ is worth ___.



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		<ul style="list-style-type: none"> ● Change from 10p 	<ul style="list-style-type: none"> ● use quantities and objects to count on and back to add and subtract 			
Summer 2	Measures	<ul style="list-style-type: none"> ● Describe capacities ● Compare volumes ● Compare weights ● Estimate, compare and order lengths 	<ul style="list-style-type: none"> ● use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems ● estimate, measure, weigh and compare and order objects ● order two or three items by length or height ● order two items by weight or capacity ● compare objects and quantities ● solve size problems involving measures ● explore measuring objects using non-standard units 	full, nearly full, half full, empty, nearly empty, half empty, the same, most, least, heavy, heavier, heaviest, light, lighter, lightest, the same, weight, more, less, about, length, same, different, how long, longer, longest, short, shorter, shortest, tall, taller, tallest,	- Make comparisons of height of themselves and discuss height and weight from being a baby to now.	<p>The ___ is the same length as the ___.</p> <p>The ___ is the same length as the ___.</p> <p>The ___ is heavier than the ___.</p> <p>The ___ is lighter than the ___.</p>
	Depth of numbers within 20	<ul style="list-style-type: none"> ● Explore numbers and strategies ● Recognise and extend patterns ● Apply number, shape and measures knowledge ● Count forwards and backwards 	<ul style="list-style-type: none"> ● solve problems including grouping, sharing, doubling and halving ● Records using marks that they can interpret and explain ● Begins to identify own mathematical problems based on own interests and fascinations 	Grouping, sharing, doubling, halving, numbers.	- Doubling and halving problems related to how they have changed e.g. height, age, shoe size etc.	See above.
	Numbers beyond 20	<ul style="list-style-type: none"> ● One more one less 	<ul style="list-style-type: none"> ● say which number is one more or one less than a given number 	twenty, thirty, forty, count on, one more		See above.



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		<ul style="list-style-type: none"> ● Estimate and count ● Grouping and sharing 	<ul style="list-style-type: none"> ● solve problems including grouping and sharing ● estimate a number of objects and check by counting ● explore counting on and back from any number within 50 ● solve practical problems that involve combining groups of 2, 5 or 10, or sharing into ● equal groups 	<p>than, one fewer/less than, estimate, check, greater than, fewer than, share, equal, unequal, more than, fewer than,</p>		
	Problem Solving		<ul style="list-style-type: none"> ● show an interest in number problems ● begin to identify own mathematical problems based on own interests and fascinations ● solve problems including doubling, halving and sharing 			See above.



Maths Scheme of Work 2022-2023

EYFS Maths Meeting		
Autumn	Spring	Summer
<p>Number:</p> <ul style="list-style-type: none"> ● Recognising numerals to 10 ● Show an awareness of even and odd numbers to 5 ● Count reliably with numbers from 1 to 10 both forwards and backwards along a number line ● Say which number is one more or one less than a given number within 10 ● Add and subtract two single-digit numbers ● Represent and use number bonds within 5 ● Subitising within 5 ● Composition of numbers to 5 <p>Shape:</p> <ul style="list-style-type: none"> ● Recognise, describe and create patterns that are the same and different ● Explore characteristics of everyday objects and shapes and use mathematical language to describe them ● Use common shape names ● Responds to and uses language of position and direction e.g. on top of. <p>Measure:</p> <ul style="list-style-type: none"> ● Order objects according to length or height and use everyday language to talk about size, weight, capacity <p>Time:</p> <ul style="list-style-type: none"> ● Days of the week and months of the year ● Orders and sequences events in everyday life and stories <p>Money:</p>	<p>Number:</p> <ul style="list-style-type: none"> ● Subitising within 10 ● subitise larger numbers by subitising smaller groups within the number e.g. sees six raisins on a plate as three and three ● Show an awareness of even and odd numbers to 10 ● Say which number is one more or one less than a given number within 20 ● Count reliably with numbers from 1 to 10 (Spring 1) 1 - 20 (Spring 2) forwards and backwards ● Represent and use number bonds within 5 and recall these automatically ● represent doubling facts using resources and begin to recall these automatically using numbers to 10 (Spring 2) ● Use a range of representations to model adding and subtracting ● Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same ● Share/group a number of objects into 2's, 5's and 10's equally ● Composition of numbers to 10 <p>Shape:</p> <ul style="list-style-type: none"> ● Explore, recognise, naming and matching 2D and 3D shapes and use mathematical language to describe them 	<p>Number:</p> <ul style="list-style-type: none"> ● Subitising 5, 10 and 15. ● Count reliably with numbers from 1 - 20 forwards and backwards ● Show an awareness of even and odd numbers to 20 ● Explore counting on and back from any number within 50 in 2's, 5's and 10's. ● Double and half numbers (within 10) ● Add and subtract two single-digit numbers and count on or back to find the answer using a range of strategies (ten frame, number line etc.) ● Composition of numbers to 5, 10 and 15. ● Represent and use number bonds within 5 and 10 and recall these automatically e.g. number bond tennis ● represent doubling facts using resources and recall these automatically using numbers to 10 e.g. double tennis ● Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same <p>Shape:</p> <ul style="list-style-type: none"> ● Naming and matching 2D and 3D shapes and use mathematical language to describe them including face, edge, side and vertices <p>Measure:</p> <ul style="list-style-type: none"> ● Compare two or more objects and quantities in length, weight and capacities



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<ul style="list-style-type: none">● Introduce coins 1p, 2p, 5p and 10p	<ul style="list-style-type: none">● Ordering lengths and using comparative vocabulary <p>Time:</p> <ul style="list-style-type: none">● Days of the week (today, tomorrow and yesterday) and months of the year● Introduce the clock and talk about familiar times of the day <p>Money:</p> <ul style="list-style-type: none">● Use everyday language to talk about money, recognise coins up to 50p and their values <p>Measures:</p> <ul style="list-style-type: none">● use spatial language, including following and giving directions, using reactive terms and describing what they see from different view points	<p>Time:</p> <ul style="list-style-type: none">● Introduce o'clock
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Maths Scheme of Work 2022-2023

Year 1

Year 1				
Autumn 1	Numbers and Place Value within 10 (10 lessons)		Addition and Subtraction within 10 (10 lessons)	Shapes and Patterns (10 lessons)
Autumn 2	Numbers and Place Value within 20 (10 lessons)		Addition and Subtraction within 20 (10 lessons)	Consolidation (5 lessons)
Spring 1	Time (10 lessons)		Exploring calculation strategies within 20 (5 lessons)	Addition and Subtraction within 20 (10 lessons)
Spring 2	Fractions (5 lessons)	Measures: Length and Mass (10 lessons)	Numbers and Place Value to 50 (10 lessons)	Consolidation (5 lessons)
Summer 1	Numbers 50 – 100 and beyond (10 lessons) 1st lesson consolidates numbers to 50.		Addition and subtraction (10 lessons)	Money (5 lessons)
Summer 2	Multiplication and Division (10 lessons)		Consolidation (5 lessons)	Measures: Capacity and Volume (10 lessons)
				Problem solving/investigation week (5 lessons)



Maths Scheme of Work 2022-2023

Year 1

Year 1						
Term and Overall Unit Focus	Unit of Work:	Unit overview:	Skills:	Key vocabulary:	What this looks like in practise (topic related):	Sentence Stems:
Autumn 1	Numbers and Place Value within 10	<ul style="list-style-type: none"> ● Representing Numbers ● Composition of numbers ● Doubling and halving ● One more and one less ● Comparison of numbers 	<ul style="list-style-type: none"> ● sort objects based on an amount provided ● count to ten, forwards and backwards, beginning with 0 or 1, or from any given number as well as counting objects ranging from 0-10 ● identify and represent numbers using objects and pictorial representations including the number line ● compare groups using the language of: equal to, more than, less than (fewer), most, least ● read and write numbers to 10 in numerals and words ● given a number, identify one more and one less ● introduce >, < and = symbols ● order numbers and groups of objects ● introduce ordinal numbers including 1st, 2nd and 3rd. ● count in multiples of twos, fives and tens ● double and halve numbers within 10 ● estimate numbers within 10 	One, two, three, four, five, six, seven, eight, nine, ten, the same, as many, more, fewer, is equal to, part, whole, number bond, represent, double, equal, equal parts, half, halve, inverse, compare, order, less, greater, greatest, smaller, smallest.	- Using farm animals to count, find one more and represent different numbers. E.g. how many cows are there?	One more than ____ is. One less than ____ is. I know there is ____ cubes because ____. ____ is greater than ____. ____ is smaller than ____. Half of ____. Double ____ is.
	Addition and subtraction within 10	<ul style="list-style-type: none"> ● Addition ● Counting on ● Commutativity 	<ul style="list-style-type: none"> ● read, write and interpret mathematical statements involving addition (+) and equals (=) signs begin with using 	Equation, add, addition, sign, symbol, plus, is	- Using farm related objects to represent	I know ____ add ____ is ____.



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	<ul style="list-style-type: none"> ● Partitioning ● Counting back ● Subtraction ● Related facts 	<p>conceptual notations of a part whole model combining two quantities and partitioning quantities</p> <ul style="list-style-type: none"> ● read, write and interpret mathematical statements involving subtraction (–) and equals (=) signs begin with using conceptual notations of a part whole model combining two quantities and partitioning quantities ● introduce fact families and addition facts ● represent and use number bonds to 10 as well as beginning to compare these ● provide systematic methods for number bonds to 10 (ten frame; numicon; bead strings) ● solve one-step problems that involve addition to 10 and 0 using concrete objects and pictorial representations, and missing number problems – using first then and now. 	<p>equal to, altogether, part, whole, count on, sum, subtract, minus, number line, related, total.</p>	<p>addition and subtraction e.g. using animals placed on a ten frame or part whole model.</p>	<p>I know _____ subtract _____ is _____.</p> <p>If I know _____ then I know _____.</p> <p>Two parts make a whole.</p> <p>_____ is the whole; _____ is a part and _____ is a part.</p>
Shape and patterns	<ul style="list-style-type: none"> ● Identifying, classifying, sorting and describing 3D shapes ● Identifying, classifying, sorting and describing 2D shapes ● Repeating patterns 	<ul style="list-style-type: none"> ● recognise and name common 2-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles ● recognise and name common 3-D shapes, including: 3-D shapes [for example, cuboids (including cubes), pyramids and spheres ● make comparisons and share differences of structures of the same shape e.g. long fat cylinder, short thin cylinder however they are both cylinders ● sort and classify 2D shapes ● sort and classify 3D shapes 	<p>Cube, cuboid, cylinder, cone, sphere, pyramid, rectangle, square, circle, oblong, triangle, side, corner, vertex, vertices, curved, straight, pattern, repeating pattern, before, after, next, bigger, smaller, between, last, last but one, next to, in</p>	<p>- Using a farm house to look at different 3D shapes they can see.</p> <p>- Using 2D/3D shapes to create pictures of animals or farms.</p>	<p>A _____ has _____.</p> <p>The difference is _____.</p> <p>The similarity is _____.</p>



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		<ul style="list-style-type: none"> ● Position, direction and movement 	<ul style="list-style-type: none"> ● make, interpret and create 2D and 3D shape patterns ● compose and decompose 2D shapes e.g. arranging shapes to match a 2D image ● be able to find shapes within shapes ● compose and decompose 3D shapes to make a model e.g. interlinking cubes to make an L and being able to compare two of the same shapes in different positions describe position, direction and movement, including whole and half turns 	front of, under, left, right, between, above, forward, quarter turn, algorithm, backward.		
Autumn 2	Numbers and Place Value within 20	<ul style="list-style-type: none"> ● Representing numbers to 20 ● Number lines ● One more and one less ● Comparing ● Ordering numbers ● Patterns ● Doubles and halves ● Odd and even 	<ul style="list-style-type: none"> ● count to twenty, forwards and backwards, beginning with 0 or 1, or from any given number ● count, read and write numbers from 1 to 20 in numerals and words making reference to odd and even numbers ● count one more and one less from a given number to 20 using a range of strategies ● compare groups of objects and numbers using language; greater, less, more, fewer and difference. ● identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least ● count in multiples of twos and fives ● double and halve numbers within 20 	Eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, represent, count on, number line, more than, less than, before, after, order, difference, tens, ones, greater, less, more, fewer, compare, value, increase, decrease, pattern, double, half, equal, odd, even, fair, unfair.		<p>____ is odd.</p> <p>____ is even.</p> <p>One more than ____ is.</p> <p>One less than ____ is.</p> <p>____ is greater than ____.</p> <p>____ is smaller than ____.</p>
	Addition and subtraction within 20	<ul style="list-style-type: none"> ● Counting on ● Counting back ● Known facts ● Make ten 	<ul style="list-style-type: none"> ● Find, represent and use number bonds and related subtraction facts within 20 ● add one-digit and two-digit numbers to 20, including zero ● subtract one-digit and two-digit numbers to 20, including zero 	First, then, now, more, number line/track, represent, add, addition, equation, subtract, subtraction,	- Using crash bang, winter wonderland objects to use for addition	I know ____ add ____ is ____.



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			<ul style="list-style-type: none"> ● read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ● solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems ● begin to estimate to check answers 	equation, take away, number bond, known fact, is equal to, 'make ten' strategy, partition, minus, model.	and subtraction.	<p>I know _____ subtract _____ is _____.</p> <p>If I know _____ then I know _____.</p> <p>_____ is the whole; _____ is a part and _____ is a part.</p>
Spring 1	Time	<ul style="list-style-type: none"> ● Ordering months ● Sequencing events ● Minutes and seconds ● O'clock and half past ● Read and write o'clock and half past ● Time word problems ● Position, direction and movement 	<ul style="list-style-type: none"> ● recognise and use language relating to dates, including days of the week, weeks, months and years ● compare, describe and solve practical problems for time for example, quicker, slower, earlier, later and measure and begin to record time in hours, minutes, seconds ● sequence events in chronological order using language for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening ● tell the time to the hour and half past the hour and draw the hands on a clock face to show these times ● compare time ● describe position, direction and movement, including whole, half, quarter and three-quarter turns, with reference to the clock face 	January, February, March, April, May, June, July, August, September, October, November, December, month, year, date, before, after, next, then, first, minute, second, clock, longer, shorter, minute hand, second hand, hour hand, half past, time, half way between, o'clock, straight up, straight down, whole, quarter turn, clockwise, anti-clockwise.	- Using activities for time related to the topic. E.g. at 5 o'clock the fire of London started	The time is _____.
	Exploring calculation	<ul style="list-style-type: none"> ● Known facts ● Near doubles 	<ul style="list-style-type: none"> ● represent and use number bonds and related addition and subtraction facts within 20 	Part, whole, related, known fact, number bond, double, near		I know _____ add _____ is _____.



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	strategies within 20	<ul style="list-style-type: none"> ● Make 10 ● Understanding the = sign 	<ul style="list-style-type: none"> ● add and subtract one-digit and two-digit numbers to 20, including zero ● read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ● solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems ● using calculation strategies including: known fact, make 10, near doubles 	double, 'make ten' strategy, partition, addition, subtraction, equal, is equal to, equation, plus, efficient.		<p>I know ____ subtract ____ is ____.</p> <p>____ is the whole; ____ is a part and ____ is a part.</p> <p>If I know ____ then I know ____.</p>
	Addition and subtraction within 20	<ul style="list-style-type: none"> ● More and fewer ● Difference ● Greater and less ● Make ten – finding the difference ● Subtraction and addition equations ● Solving problems 	<ul style="list-style-type: none"> ● find, represent and use number bonds and related addition and subtraction facts within 20 ● add and subtract one-digit and two-digit numbers to 20, including zero ● add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers (Y2) ● read, write, and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ● solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems ● begin to estimate to check answers 	Compare, more, fewer, difference, greater than, less than, 'make ten', subtract, equation, add.		<p>I know ____ add ____ is ____.</p> <p>I know ____ subtract ____ is ____.</p> <p>If I know ____ then I know ____.</p> <p>____ is the whole; ____ is a part and ____ is a part.</p>
	Fractions	<ul style="list-style-type: none"> ● Identify half of shape 	<ul style="list-style-type: none"> ● recognise, find and name a half as one of two equal parts of an object, shape or quantity 	Fraction, part, whole, compare, difference, equal	- Using objects related to the topic to find	Half of ____ is ____.



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Spring 2		<ul style="list-style-type: none"> ● Identify half of a quantity ● Identify quarter of a shape ● Identify quarter of a quantity ● Half and quarter turns 	<ul style="list-style-type: none"> ● recognise, find and name a quarter as one of four equal parts of an object, shape or quantity ● be able to write correctly $\frac{1}{2}$ and $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ understanding that the line is straight, the numerator is the amount of parts and denominator is how many parts altogether ● connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole 	parts, unequal parts, shape.	one half and one quarter of e.g. half of 6 wands.	<p>Double ____ is ____.</p> <p>The numerator is ____.</p> <p>The denominator is ____.</p> <p>Two halves make a whole.</p> <p>4 quarters make a whole.</p>
	Measures: Length and Mass	<ul style="list-style-type: none"> ● Comparing lengths ● Non-standard units ● Standard units ● Doubling and halving of lengths ● Comparing weight ● Weighing objects using non-standard units 	<ul style="list-style-type: none"> ● compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half; mass/weight for example, heavy/light, heavier than, lighter than ● measure and begin to record the following: lengths and heights; mass/weight ● use both standard and non-standard units ● to use manageable common standard units using measuring tools, such as a rule, weighing scales and containers 	Part, whole, equal, unequal, half, divide, half, share, divide, quarter, divide, clockwise, anti-clockwise, three-quarter.	<ul style="list-style-type: none"> - Measuring the height of castles and the length of their wands/hats. - Weighing their potions. 	<p>The ____ is heavier.</p> <p>The ____ is lighter.</p> <p>The ____ is smaller.</p> <p>The ____ is taller.</p> <p>The ____ is longer.</p> <p>The ____ is the same length as the ____.</p>



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						<p>The ___ is the same length as the ___.</p> <p>The ___ is heavier than the ___.</p> <p>The ___ is lighter than the ___.</p>
	Numbers and Place Value to 50	<ul style="list-style-type: none"> Sequencing numbers Groups of 10 Exploring tens and ones Place value Compare and order numbers using a place value chart Compare and order numbers using a number line Counting in 2's and 5's Number patterns 	<ul style="list-style-type: none"> count to 50 and 100, forwards and backwards, beginning with 0 or 1, or from any given number count in twos, fives and tens. count, read and write numbers from 1 to 50 and to 100 in numerals and begin to in words identify, represent and compare numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least given a number, identify one more and one less order numbers within 50 using a place value chart and dienes recognise the place value of each digit in a two-digit number (tens, ones) 	More, less, numbers to 50, multiple of 10, group of 10, twenty, thirty, forty, fifty, pattern, ones, digit, left, right, place value, part, whole, greater, greatest, less, least, smaller, smallest, order, compare, between, less than, more than, greater than, groups of five, pattern, increase, decrease.		<p>One more than ___ is.</p> <p>One less than ___ is.</p>
	Numbers 50 to 100 and beyond	<ul style="list-style-type: none"> Counting in 10's and on in 1's Place value up to 99 	<ul style="list-style-type: none"> represent and use number bonds and related subtraction facts within 20 and beyond based on their knowledge of number bonds 	Tall, taller, tallest, short, shorter, shortest, long, longer, longest, low, lower, high, higher,	-Comparing how temperatures have changed	___ is greater than ___.



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Summer 1		<ul style="list-style-type: none"> ● One more, one less, ten more, ten less, ● Comparing using a number line and place value chart ● Sequencing numbers ● Number patterns 	<ul style="list-style-type: none"> ● add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers (Y2) ● read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ● solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems ● add and subtract one-digit and two-digit numbers, including zero, regrouping and bridging 10 ● estimate to check answers 	height, length, measure, measurement, close to, roughly, nearly, about, about the same as, size, compare, unit, metre stick, metre, one half, estimate, double, balance, heavy, light, heavier, lighter, heaviest, lightest, weight, mass, level, approximately, predict, kilogram (kg).	in different habitats. -Exploring how climate change is affecting the number of trees and animals.	<p>The number has _____ tens and _____ ones.</p> <p>One more than _____ is _____.</p> <p>One less than _____ is _____.</p> <p>The pattern is increasing by _____.</p> <p>The pattern is decreasing by _____.</p>
	Addition and subtraction within 100	<ul style="list-style-type: none"> ● Number bonds ● Add and subtract two digit numbers and ones ● Add subtract two digit numbers and ones with regrouping 	<ul style="list-style-type: none"> ● represent and use number bonds and related subtraction facts within 20 and beyond based on their knowledge of number bonds ● add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers (Y2) ● read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ● solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems 	Groups of ten, tens, ones, count on, place value, dienes, hundreds, place value chart, number bond, multiple of ten, part-whole model, one more, ten more, one less, ten less, one fewer, ten fewer, greater than, less than, compare, most, least, equal to, increase, decrease, sequence, pattern.		<p>_____ + _____ = _____.</p> <p>I need to exchange my ten ones for one ten.</p> <p>I need to exchange my one ten for ten ones.</p> <p>This pattern is increasing.</p> <p>This pattern is decreasing.</p>



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			<ul style="list-style-type: none"> • add and subtract one-digit and two-digit numbers, including zero by bridging and regrouping • estimate to check answers • discuss and solve one step problems that involve addition and subtraction, using pictorial representations, concrete objects and missing number problems 			
	Money	<ul style="list-style-type: none"> • Properties of coins • Value • Comparing amounts • Exchanging money for objects • Paying and giving change 	<ul style="list-style-type: none"> • understand the properties of coins including shape and colour • recognise and know the value of different denominations of coins and notes • compare values of coins based on knowledge of what they are made up of solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems 	Coin, round, heptagonal, gold, silver, copper, pence, penny, value, worth, notes, pound, greatest value, least value, most, add, subtract, column, row, buy sell, afford, total, altogether, change.	<ul style="list-style-type: none"> - Set up class shops related to what they might sell in their shop when they grow up. - Role playing visiting the shops when they are an adult. 	This is _____p coin.
Summer 2	Multiplication and division	<ul style="list-style-type: none"> • Doubling and halving • Repeated addition • Division as sharing • Division as grouping • Arrays • Halves and quarters 	<ul style="list-style-type: none"> • recognise, find and name a half and double as one of two equal parts of a quantity • counting in two's, fives and tens – skip counting in 2's or in multiples e.g. 10, 20, 30 or 1 ten, 2 tens, 3 tens • arrays; make connections between arrays, number patterns grouping and sharing small quantities to begin understanding multiplication and division; doubling numbers and quantities' finding simple fractions of objects, number and quantities by adding equal groups, making equal groups by grouping and making equal groups by sharing 	Double, half, equal parts, whole, halve, equal groups, unequal groups, groups of, lots of, altogether, repeated addition, sides, share, fair, equally, array, column, row, fraction, divide, quarter.		<p>Each _____ has ____ parts.</p> <p>Count in groups of _____.</p> <p>Double ____ is equal to _____.</p> <p>Half of ____ is equal to _____.</p> <p>I know _____ X _____ = _____.</p>



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			<ul style="list-style-type: none"> ● solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. 			I know ____ / ____ = ____.
Measures: Capacity and Volume	<ul style="list-style-type: none"> ● Comparing capacity ● Comparing volume ● Halves and quarters ● Standard units ● Difference and distance ● Using length and weight ● 	<ul style="list-style-type: none"> ● compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half; mass/weight for example, heavy/light, heavier than, lighter than; capacity and volume for example, full/empty, more than, less than, half, half full, quarter ● measure and begin to record the following: lengths and heights; mass/weight; capacity and volume 	Compare, capacity, greater, smaller, unit, about, volume, half, quarter, equal, litre, standard unit, distance, length, difference, measure, same, weighing scales, gram.	-Comparing how our height has changed as we grow up.	<p>The ____ is the same length as the ____.</p> <p>The ____ is the same length as the ____.</p> <p>The ____ is heavier than the ____.</p> <p>The ____ is lighter than the ____.</p>	
Problem Solving		<ul style="list-style-type: none"> ● practise ordinal numbers and solve simple concrete problems ● discuss and solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems ● solve problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with support of teacher 				



Maths Scheme of Work 2022-2023

Year 1 Maths Meeting		
Autumn	Spring	Summer
<p>Number:</p> <ul style="list-style-type: none"> Count to twenty, forwards and backwards, beginning with 0 or 1, or from any given number in 2's, 5's and 10s. Double and halve numbers within 10 Represent and use number bonds within 10 (using a range of representations including part-whole model) <p>Shape:</p> <ul style="list-style-type: none"> Name, recognise, sort and classify 2D and 3D shapes <p>Measures:</p> <ul style="list-style-type: none"> Compare, describe and order capacities, lengths and heights <p>Time:</p> <ul style="list-style-type: none"> Tell the time to the hour and introduce half past the hour Measure and begin to record time (hours, minutes, seconds) Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) <p>Money:</p>	<p>Number:</p> <ul style="list-style-type: none"> Count to twenty, forwards and backwards, beginning with 0 or 1, or from any given number in 2's, 5's and 10s using skip counting – as well as counting up in odd numbers Represent and use number bonds within 10 (using a range of representations including part-whole model) Double and halve numbers within 20 Using calculation strategies including: known fact, make 10, near doubles Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs and use inverse to check answers Sharing and grouping of sets of objects up to 20 <p>Shape:</p> <ul style="list-style-type: none"> Name, recognise, sort and classify 2D and 3D shapes using mathematical language to describe them <p>Measures:</p> <ul style="list-style-type: none"> Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume <p>Time:</p>	<p>Number:</p> <ul style="list-style-type: none"> Addition and subtraction strategies including: known fact, make 10, near doubles Recognise the place value of each digit in a two-digit number (tens, ones) Explore repeated addition on a part whole model (make links to multiplication and division) <p>Shape:</p> <ul style="list-style-type: none"> Name, recognise, sort and classify 2D and 3D shapes using mathematical language to describe them <p>Time:</p> <ul style="list-style-type: none"> Describe position, direction and movement, including whole, half, quarter and three-quarter turns, with reference to the clock face <p>Money:</p> <ul style="list-style-type: none"> Recognise and know the value of different denominations of coins and notes Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations



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<ul style="list-style-type: none">● Recognise and know the value of different denominations of coins and notes	<ul style="list-style-type: none">● Tell the time to the hour and half past the hour and 1 or 2 hours before/after <p>Money:</p> <ul style="list-style-type: none">● Recognise and know the value of different denominations of coins and notes● Begin to be able to add denominations of coins together● Begin to exchange coins for others of equal amounts e.g. 5p = 5 1ps.	
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Maths Scheme of Work 2022-2023

Year 2

Year 2					
Autumn 1	Numbers and Place Value within 100 (10 lessons)	Addition and Subtraction of 2-digit numbers (10 lessons)		Addition and subtraction word problems (5 lessons)	Graphs (5 lessons)
Autumn 2	Measures: Length (10 lessons)		Multiplication and Division: 2, 5 and 10 (15 lessons)		Time (5 lessons)
Spring 1	Time (5 lessons)		Fractions (10 lessons)	Addition and Subtraction of 2 digit numbers (10 lessons)	
Spring 2	Money (10 lessons)	Face, shapes and patterns; lines and turns (15 lessons)			Measures: Mass (5 lessons)
Summer 1	Exploring calculation strategies (10 lessons)		SATS Prep Problem Solving (5 lessons)	SATS Week	Consolidation (5 lessons)
Summer 2	Capacity and Volume (10 lessons)		Numbers within 1000 (10 lessons)		Multiplication and Division: 3 and 4 (10 lessons)



Maths Scheme of Work 2022-2023

Year 2

Year 2						
Term and Overall Unit Focus:	Unit of Work:	Unit overview:	Skills:	Key vocabulary:	What this looks like in practise (topic related):	Sentence Stems:
Autumn 1	Numbers and Place Value within 100	<ul style="list-style-type: none"> Place value Tens and ones 2-digit partitioning Representing 2 numbers Comparing numbers to 100 Ordering numbers to 100 Number patterns Odd and even 	<ul style="list-style-type: none"> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward using bead strings, number lines and 100 squares with increasing fluency recognise the place value of each digit in a two-digit number (tens, ones) compare and order numbers from 0 up to 100; use <, > and = signs read and write numbers to at least 100 in numerals and in words use place value and number facts to solve problems and compare numbers within 50 and beyond Connect the way that numerals are written and their value e.g. 2 groups of 10 and 3 ones is 23 using place value of tens and ones to add numbers together and represent numbers using a part whole model represent numbers to 100 by composing and decomposing two-digit numbers using standard and nonstandard partitioning 	Group, ten, altogether, strategy, left over, ones, tens, 1-digit number, 2-digit number, value, worth, partition, represents, compare, greatest, smallest, greater than, less than, is equal to, order, increasing, decreasing, more, less, forwards, backwards, counting, odd, even.		<p>The number _____ is greater than _____.</p> <p>The number _____ is smaller than _____.</p> <p>This number has _____ tens and _____ ones.</p> <p>This pattern is decreasing.</p> <p>This pattern is increasing.</p>



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			<ul style="list-style-type: none"> identify, represent and estimate numbers to 100 using different representations, including the number line Reason about the location of any two digit number in the linear number system, including identifying the previous and next multiple of 10 			
Addition and subtraction of 2-digit numbers	<ul style="list-style-type: none"> Number bonds to 20 (addition) Number bonds to 20 (subtraction) Adding and subtracting ones from a 2-digit number Add and subtract multiples of 10 Add and subtract tens from a 2-digit number Adding and subtracting 	<ul style="list-style-type: none"> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 of 10s recall and use addition and number bonds to 10, 20 and use these to reason with and calculate bonds to and within 20 recognising other associate additive relationships find 10 more and 10 less from any given number add and subtracts 10's show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot subtracting tens or ones by crossing the 10 barrier adding tens and ones by crossing the 10 barrier add and subtract number, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers 	<p>Whole, part, tens, ones, partition, 'if I know... then I know...', number bonds, doubles, near doubles.</p> <p>- Using farm animals as representations e.g. 5 cows on a ten frame and 5 pigs make ten (making link to the number bond).</p> <p>- Use the topic as a context for addition and subtraction e.g. the farmer had 10 sheep but sold 5 of them. How many does he have left?</p>	<p>I know ____ + ____ = ____.</p> <p>If I know ____ then I know ____.</p> <p>____ + ____ = ____.</p> <p>I need to exchange my ten ones for one ten.</p> <p>I need to exchange my one ten for ten ones.</p>		



Maths Scheme of Work 2022-2023

		<p>2 digit numbers</p> <ul style="list-style-type: none"> ● Adding 3 digit numbers 	<ul style="list-style-type: none"> ● Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?" ● calculating/adding with three numbers 			
	Addition and subtraction word problems	<ul style="list-style-type: none"> ● Introduce bar models as a representation and create, label and sketch bar models 	<ul style="list-style-type: none"> ● solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods ● recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems ● estimate the answer to a calculation and use inverse operations to check answers 	Whole, part, add, subtract, bar model, value, known, unknown, worth, more, fewer, amount, difference.	- Use the topic as a context for addition and subtraction e.g. the farmer had 10 sheep but sold 5 of them. How many does he have left?	<p>I know _____ + _____ = _____.</p> <p>If I know _____ then I know _____.</p> <p>_____ + _____ = _____.</p>
	Graphs	<ul style="list-style-type: none"> ● Pictograms ● Block diagrams ● Tally chart ● Scaled pictogram 	<ul style="list-style-type: none"> ● interpret and construct simple pictograms, tally charts, block diagrams and simple tables ● ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ● ask and answer questions about totalling and comparing categorical data ● record, interpret, collate, organise and compare information ● read scales* where not all numbers on the scale are given and estimate points in between (The scale can be in the form of a number line, a practical situation or a graph axis.) 	Data, pictogram, table, collect, sort, interpret, block diagram, tally, scaled.	- Use Crash! Bang! unit topic of Firework night etc. for recording and reading data. - How many fireworks have there been?	<p>This graph is increasing by _____.</p> <p>The graph shows _____.</p> <p>I can see _____.</p>



Maths Scheme of Work 2022-2023

	Measures: Length	<ul style="list-style-type: none"> Measuring length in m Comparing lengths in m Measuring in cm Comparing length in cm Measuring lines Drawing lines Length word problems 	<ul style="list-style-type: none"> to compare measures including simple multiples such as 'half as high', 'twice as wide'. measure using cm, m and mm and record information using the correct standard abbreviations compare and order length and record the results using >, < and = choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers and scales apply knowledge of numbers to 100 to read scales to the nearest appropriate standard unit in the context of length (m/cm) 	Length, long, short, longer, shorter, shortest, longest, measure, metre, estimate, longer than, shorter than, ruler, centimetre, about, exactly, the same as, known, unknown, whole, part.	- Use the topic as a context for measuring length e.g. the hospital is 25cm tall etc.	<p>The ____ is heavier.</p> <p>The ____ is lighter.</p> <p>The ____ is smaller.</p> <p>The ____ is taller.</p> <p>The ____ is longer.</p> <p>The ____ is the same length as the ____.</p> <p>The ____ is the same length as the ____.</p>
Autumn 2	Multiplication and division: 2, 5, and 10	<ul style="list-style-type: none"> Multiplication symbols Commutativity Division as sharing and grouping Multiplication problems 	<ul style="list-style-type: none"> grouping and sharing small quantities to begin understanding multiplication and division; doubling numbers and quantities' finding simple fractions of objects, number and quantities, adding equal groups, making equal groups by grouping and making equal groups by sharing calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs 	Multiplication, repeated addition, groups of, rows, columns, part, whole, commutative, divide, share, equal, group, value, multiply, skip count, fives, two, ten.	Crash! Bang!: - There are 10 lots of fireworks, how many is that in total? - Some fireworks release 2 at a time. How many will there be after 1, 2, 3, or 4 have been set off?	<p>Each _____ has ____ parts.</p> <p>Count in groups of _____.</p> <p>Double ____ is equal to _____.</p> <p>Half of ____ is equal to _____.</p>



Maths Scheme of Work 2022-2023

		<ul style="list-style-type: none"> • Doubling • Skip counting in 2's, 5's and 10's • Patterns in 2, 5, 10 times tables • Word problems 	<ul style="list-style-type: none"> • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers and use them to solve simple problems, demonstrating and understanding of commutativity as necessary • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • connect the multiplication table to place value, and the 5 multiplication table to the divisions of a clock • recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts by dividing by each number 		<p>Winter Wonderland: Each child has 10 presents. There are 5 children? How many in total?</p> <p>Use presents or snowflakes to represent arrays.</p>	<p>I know ____ X ____ = ____.</p> <p>I know ____ / ____ = ____.</p>
	Time	<ul style="list-style-type: none"> • 24 hours in the day • 60 minutes in an hour • Quarter past • Quarter to 	<ul style="list-style-type: none"> • know the number of minutes in an hour and the number of hours in a day • know o'clock, half past, quarter past and quarter to • tell, read and write the time to five minutes, including quarter past/to the hour/half hour 	Time, hour, day, night, morning, afternoon, evening, midday, midnight, hour, minute, hour hand, minute hand, scale, quarter past,	- Use the topic to contextualise activities e.g Florence Nightingale worked for 5 hours in the	<p>The time is ____.</p> <p>The small hand is the hour hand.</p> <p>The big hand is the minute hand.</p>



Maths Scheme of Work 2022-2023

Spring 1		<ul style="list-style-type: none"> • 5 past • 5 to • Sequencing events • Duration in minutes and hours 	<p>and draw the hands on a clock face to show these times</p> <ul style="list-style-type: none"> • compare and sequence intervals of time to find durations of time and compare them • become fluent in telling the time on an analogue clock and recording it 	half past, o'clock, quarter to, earlier, later, duration, start, finish.	hospital. If she started at 4 o'clock. When would she finish? - First Florence Nightingale went to the hospital and then she treated a patient.	
	Fractions	<ul style="list-style-type: none"> • Fractions and division • Writing a fractions • Half of shapes • Thirds and quarters of shapes • Unit and non-unit fractions 	<ul style="list-style-type: none"> • Make equal parts • Identify, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, number, shape, set of objects or quantity and know that all parts must be equal parts of the whole • write simple fractions for example, $\frac{1}{2}$ of 6 = 3 • recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ • unit fractions and non-unit fractions • count in fractions 	Fraction, equal parts, whole, divide, one, share, half, quarter, numerator, denominator, vinculum, one half, one third, one quarter, halves, part, the same as.		<p>Half of _____ is _____.</p> <p>Double _____ is _____.</p> <p>The numerator is _____.</p> <p>The denominator is _____.</p> <p>Two halves make a whole.</p> <p>The shape shows _____.</p> <p>4 quarters make a whole.</p>
	Addition and subtraction of 2-digit numbers	<ul style="list-style-type: none"> • Regrouping including make 10 • Regrouping including 	<ul style="list-style-type: none"> • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • show that addition of two numbers can be done in any order (commutative) and 	Make ten, regroup, partition, tens, ones, number line, number bonds, dienes, bar model, round and adjust		<p>I know _____ + _____ = _____.</p> <p>If I know _____ then I know _____.</p>



Maths Scheme of Work 2022-2023

	(regrouping and bridging)	<p>round and adjust</p> <ul style="list-style-type: none"> ● Regrouping including near doubles 	<p>subtraction of one number from another cannot</p> <ul style="list-style-type: none"> ● add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers ● solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods ● estimate the answer to a calculation and use inverse operations to check answers ● Using 'Make Ten' and regrouping for addition ● Using 'Make Ten' and regrouping for subtraction ● Using near multiples to add and subtract ● Mentally adding with near doubles 	add, subtract, double, near double.		<p>____ + ____ = ____.</p> <p>I need to exchange my ten ones for one ten.</p> <p>I need to exchange my one ten for ten ones.</p> <p>Addition can be done in any way and I will still get the same answer.</p>
Spring 2	Money	<ul style="list-style-type: none"> ● Recognise coins ● Pounds ● Finding a total amount with the same coins and different 	<ul style="list-style-type: none"> ● fluent in counting and recognising coins ● recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value ● counting money e.g. pence, pounds, notes and coins ● find and use different combinations of coins that equal the same amounts of money finding the total, difference and change ● solve simple and two step problems in a practical context involving addition and 	Penny, pennies, pence, value, compare, greater, lower, one pound, pounds, coin, note, total, altogether, same as, equal to, change, count up, total, spent, all possibilities, systematically.	- Set up a magic shop for children to buy potions and wands etc.	<p>The change is _____.</p> <p>This coins is a _____.</p> <p>I can make _____ by using _____.</p>



Maths Scheme of Work 2022-2023

		<ul style="list-style-type: none"> ● Giving change from a pound ● Giving change 	<p>subtraction of money of the same unit, including giving change</p>			
Face, shapes and patterns; lines and turns	<ul style="list-style-type: none"> ● Explore, sort and describe 2D shapes ● Explore, sort and describe 3D shapes ● Compare and sort 2D and 3D shapes (similarities and differences) ● Line of symmetry in 2D shapes ● Position, direction and rotation 	<ul style="list-style-type: none"> ● identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces ● identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] ● identify and describe the properties of 2-D shapes, including the number of sides and line of symmetry in a vertical line ● compare and sort common 2-D and 3-D shapes and everyday objects ● order and arrange combinations of mathematical objects in patterns and sequences ● discuss and understand the differences of properties between both 2D and 3D shapes ● understand the line of symmetry and multiple ways this can be found on a shape ● use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise) 	<p>Straight, curved, side, vertex, square, oblong, rectangle, quadrilateral, triangle, circle, pentagon, hexagon, heptagon, octagon, right angle, straight lines, sides, vertices, symmetry, 2D shape, 3D shape, reflection, half, equal, exact, identical, sorting, venn diagram classify, criteria, properties, lines of symmetry, edge, vertex, cone, sphere, cylinder, pyramid, cuboid, apex, faces, depth, width, size, shape, repeating, the same, base, branching database, on, next</p>	<p>- Identifying shapes from pictures or models of castles or magic shows and comparing. - Children making their own magic scenes with 2D and 3D shapes.</p>	<p>A ____ has ____.</p> <p>The difference is ____.</p> <p>The similarity is ____.</p>	



Maths Scheme of Work 2022-2023

				to, in front of, behind, under, above, in between, left, right, below, start, end, route, forwards, backwards, clockwise, anti-clockwise, half, quarter, full turn, rotation, quarter turn, straight line.		
	Measures: Mass	<ul style="list-style-type: none"> Weigh and compare masses in kilograms and grams 	<ul style="list-style-type: none"> choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels compare and order mass and record the results using $>$, $<$ and $=$ apply knowledge of numbers to 1000 to read scales to the nearest appropriate standard unit in the context of mass (kg/g) using known facts to derive new facts ($2g + 2g = 4g$ so $200g + 200g = 400g$) 	Kilogram, heavier than, lighter than, as heavy as, weigh, mass, unit, standard unit, gram, 1000, difference, total, multiply, divide, add, part, whole.	<ul style="list-style-type: none"> - How tall am I now/was/will be? - How heavy/light am I now/was/will be? 	<p>The ___ is heavier than the ___.</p> <p>The ___ is lighter than the ___.</p>
Summer 1	Exploring calculation strategies	<ul style="list-style-type: none"> Apply strategies to solve addition and subtraction equations Introduce column method 	<ul style="list-style-type: none"> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot add and subtract numbers mentally, including: a two-digit number and ones; a 	Make ten, number bonds, partition, round and adjust, known facts, near doubles, part, whole, known, unknown, add, subtract, more, fewer, less, difference, place value, tens, ones,		I can use _____ strategy.



Maths Scheme of Work 2022-2023

			<p>two-digit number and tens; adding three one-digit numbers</p> <ul style="list-style-type: none"> add and subtract numbers with up to two digits, using written methods 	column, is equal to, regroup.		
	Problem Solving		<ul style="list-style-type: none"> to use place value and number facts to solve related problems to develop fluency solve problems with addition and subtraction: using concrete objects and pictorial representations, involving numbers, quantities and measures applying their increasing knowledge of mental and written methods solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts use reasoning about numbers and relationships to solve more complex problems and explain their thinking solve unfamiliar word problems that involve more than one step 		- Problem solving activities related to the overall topic.	
Summer 2	Measures: Capacity and volume	<ul style="list-style-type: none"> Read and measure temperature Estimate, measure and understand litres and millilitres 	<ul style="list-style-type: none"> choose and use appropriate standard units to estimate and measure capacity (litres/ml) and temperature ($^{\circ}\text{C}$) to the nearest appropriate unit, using scales, thermometers and measuring vessels compare and order volume and capacity and record the results using $>$, $<$ and $=$ apply knowledge of numbers to 1000 to read scales to the nearest appropriate standard unit in the context of capacity (litres/ml) and temperature ($^{\circ}\text{C}$) 	Temperature, thermometer, unit of measure, degrees, Celsius, heat, hot, cold, warmer, cooler, more than, less than, estimate, capacity, one litre, volume, bar model, fractions, one half,		



Maths Scheme of Work 2022-2023

		<ul style="list-style-type: none"> Compare and order capacities 	<ul style="list-style-type: none"> using known facts to derive new facts (2ml + 2ml =4ml so 200ml + 200ml =400ml) 	double, one quarter, two quarters, three quarters, millilitre, altogether, difference, number bonds, part, whole, total.		
	Numbers within 1000	<ul style="list-style-type: none"> Represent numbers in different ways Compare and use symbols Read scales 	<ul style="list-style-type: none"> use place value and number facts to solve problems identify, represent and estimate numbers to 1000 using different representations (Y3) recognise the place value of each digit in a three-digit number (hundreds, tens, ones) (Y3) compare and order numbers up to 1000 (Y3) read and write numbers up to 1000 in numerals and in words (Y3) count from 0 in multiples of 100; find 10 or 100 more or less than a given number (Y3) apply knowledge of numbers to 1000 to read scales begin to understand zero as a place holder 	Hundreds, tens, ones, place value chart, regrouping, numbers 0 – 99, whole, part, dienes, exchange, compare, greater than, less than, the same as, more, fewer, scale, mark, intervals.		
	Multiplication and division: 3 and 4	<ul style="list-style-type: none"> Relate 4 times table to doubling the 2 times table Recognise inverse relationship 	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 3 and 4 multiplication tables (Y3) calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication 	Multiply, three, skip counting, number line, bead string, product, multiple of, group, part, whole, divide, array, share, commutative, multiplication, division, equal, bar model, problem solving, twice as		



Maths Scheme of Work 2022-2023

			<p>and division facts, including problems in contexts</p> <ul style="list-style-type: none">• show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot• count from 0 in multiples of 4, 8, 50 and 100	<p>many, three times as many, half of, one quarter of, one third of.</p>		
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Maths Scheme of Work 2022-2023

Year 2 Maths Meeting		
Autumn	Spring	Summer
<p>Number:</p> <ul style="list-style-type: none"> Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract number, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens find 10 more and 10 less from any given number <p>Shape:</p> <ul style="list-style-type: none"> Identify and describe the properties of 2-D and 3-D shapes, including the number of edges, vertices and faces and begin to make comparisons Use mathematical vocabulary to describe position, direction and movement <p>Measures:</p> <ul style="list-style-type: none"> Measure and compare using cm, m and mm and record information using the correct standard abbreviations Compare, describe and order capacities, lengths and heights 	<p>Number:</p> <ul style="list-style-type: none"> Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract number, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens (regrouping) Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers <p>Shape:</p> <ul style="list-style-type: none"> Identify and describe the properties of 2-D and 3-D shapes, including the number of edges, vertices and faces Use mathematical vocabulary to describe position, direction and movement <p>Time:</p> <ul style="list-style-type: none"> Know o'clock, half past, quarter past and quarter to Tell, read and write the time to five minutes, including quarter past/to the hour/half hour Connect the multiplication table to place value, and the 5 multiplication table to the divisions of a clock <p>Money:</p> <ul style="list-style-type: none"> solve simple and two step problems in a practical context involving addition and subtraction of money of the same unit 	<p>Number:</p> <ul style="list-style-type: none"> Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract number, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens (regrouping) Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Solve problems with addition and subtraction using chosen mental and written methods Use and apply the inverse method to check answers <p>Measures:</p> <ul style="list-style-type: none"> Compare, describe and order capacities, lengths and heights Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume Recall standard unit's measurement including how many l in a L and how many cm in a m choose and use appropriate standard units to estimate and measure mass (kg/g) to the



Maths Scheme of Work 2022-2023

<ul style="list-style-type: none">● Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume● Interpret and construct simple pictograms, tally charts, block diagrams and simple tables (create a daily tally chart e.g. travel to school/weather) <p>Time:</p> <ul style="list-style-type: none">● Know o'clock, half past, quarter past and quarter to <p>Money:</p> <ul style="list-style-type: none">● Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	<p>Measures:</p> <ul style="list-style-type: none">● Compare, describe and order capacities, lengths and heights● Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume● Recall standard units measurement including how many l in a L and how many cm in a m	<p>nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p> <p>Time:</p> <ul style="list-style-type: none">● Know o'clock, half past, quarter past and quarter to● Tell, read and write the time to five minutes, including quarter past/to the hour/half hour● Connect the multiplication table to place value, and the 5 multiplication table to the divisions of a clock● compare and sequence intervals of time <p>Money:</p> <ul style="list-style-type: none">● solve simple and two step problems in a practical context involving addition and subtraction of money of the same unit
<p>Children should;</p> <ul style="list-style-type: none">● Recall simple number facts using songs or phrases● Use a whiteboard and pen to make notes and use their workings out during MM● Provide opportunities where children can recall different strategies to support workings out● Engage in suitable challenges throughout including GD activities where appropriate		