

Nursery

	Autumn	Spring	Summer
Subitising	Fast recognition of amounts up to 3	Show fingers for amounts up to 4	Show fingers for amounts up to 5
Cardinality, ordinality and counting	- Counting: saying number words in sequence to 5 - Recall number rhymes	- Counting: saying number words in sequence to 10 - Recall number rhymes - In play moving objects as we count and know that the final number is the amount.	- Reliably count one to one correspondence up to 5 objects. - Recall number rhymes
Composition	To observe building towers and making towers smaller.	To know that when we add one more a tower gets taller	To add one more and take one away from a tower and recognise what happens.
Comparison	Opportunities to sort and compare sets of objects	Introduction to comparison vocabulary most and fewest	Begin to use comparison vocabulary most and fewest, more than and fewer than.
Shape, space and pattern	- Continuing an AB pattern - Developing spatial awareness - Opportunities to compare measures long/taller/shorter - Select shapes appropriate for building	- Copying an AB pattern - Developing spatial vocabulary - Develop vocabulary related to longer shorter and taller - Talk about shapes used in construction	- Making their own AB pattern - Use spatial vocabulary - Use vocabulary in activities relating to comparison of measures - Begin to name some 2D shapes.

Reception

	Autumn	Spring	Summer
Subitising	- Identify when a set can be subitised and when counting is needed. - Subitise different arrangements, both unstructured and structured. - Make different arrangements of numbers within 5 and talk about what they can see.	- Develop 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'	- Identify when sets can be subitised and when counting is Necessary. - Explore representations of numbers and parts of numbers within 10.
Cardinality, ordinality and counting	- Explore different ways of representing numbers on their fingers. - Secure 1: 1 correspondence when counting. - Develop counting skills and knowledge to include that the last number counted is 'how many'.	- Develop understanding of the counting sequence through cardinality. - Order numbers within 10. - Join in verbal counting beyond 20.	Develop counting skills, counting larger sets as well as counting actions and sounds.
Composition	- Begin to recognise that when counting, each number is made of one more than the previous number. - Begin to develop the language of 'whole' when talking about objects which have parts	- Recognise two equal groups as double within 5. - Sort odd and even numbers within 5 and then 10 by making patterns and shapes.	- Arrange doubles using 10 frames and fingers. - 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.
Comparison	Compare sets of objects by matching pictures or similar items.	Compare numbers as equal or unequal groups	Compare quantities and numbers, including sets of objects which have different attributes
Shape, space and pattern	- Recognise simple 2D shapes - Create ABC or ABB patterns. - Use simple comparative language.	- Talk about what is the same and different in sets of shapes - Create and repeat ABC, ABB and ABBC patterns - Describe using comparative language	- Describe simple features of common shapes. - Continuing, making or identifying errors in repeated patterns

Year 1 long term maths plan

Ongoing coverage		
- Mastering Number daily session - Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Recognise and use language relating to dates, including days of the week, weeks, months and years - Tell the time to the hour and half past the hour and draw the hands on a clock face to show the time.		
Autumn	Spring	Summer
Counting within 100 - Comparison to include more, less, fewer, greater. - Cardinality – the last number counted is the total of a set. - Place value of 2-digit numbers	Recognise, compose, decompose and manipulate 2D and 3D shapes - Name and recognise common 2D and 3D shapes - Describe and compare 2D and 3D	Numbers 0 -20 - Understand numbers from 11-20 as 10 and a bit more - Find odd and even within 20 - Measure in cm cubes
Comparison of quantities and the part-whole relationship - Understanding the concept of a whole and part - Recognise when a value is a whole or part of another whole.	Numbers 0-10 - Recognise numbers between 5 and 9 as 5 and a bit more. - Partition numbers 6-10 systematically.	Unitising and coin recognition - Count in groups of 2, 5 and 10. - Recognise the value of 2p, 5p and 10p coins. - Calculate the number of different coins needed to make 10p.
Comparison, calculation and value of numbers 0-5 - Missing number problems within 5 - Find 1 more or 1 less. - Partition numbers from 0 -5 systematically.	Additive structures - Understand the role of =, + and – - Understand that addition and subtraction are inverse.	Position and direction - Use language of whole and half tern - Ordinal language (1st, 2nd etc.) - Comparative language (longer, shorter, taller, fewer etc).
	Addition and subtraction within 10 - Pairs of numbers that sum to 10 - Double and half.	Time - Know that time is a measure - Recognise 'o'clock' and half past and tell the time to these intervals.

Year 2 long term maths plan

Ongoing coverage		
- Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward - Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times - Know the number of minutes in an hour and the number of hours in a day		
Autumn	Spring	Summer
Numbers 10 -100 - Position of numbers 0-100. - Add and subtract multiples of 10. - Compare two, two-digit numbers.	Introduction to multiplication (cont.) - Recognise, represent and calculate using the 2, 5 and 10 times tables. - Double and halve two-digit numbers.	Money - Understand the term 'pound' and recognise values that make £1. - Solve addition and subtraction problems with money.
Calculations within 20 - Add three, one-digit numbers - Find difference. - Calculate when bridging through 10.	Introduction to division structures - Know what division is and its relationship to multiplication. - Skip count using a divisor to find the quotient.	Fractions - Recognise if something is split into equal or unequal groups. - Find $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$ of a set.
Fluently add and subtract within 10 Add and subtract numbers within 10 in different contexts.		Time - Read the time to 5-minute intervals. - Say the time as an 'o'clock, half past, quarter past or to, or 5-minute intervals.
Addition and subtraction of 2-digit numbers - Add and subtract a ones digit to and from any two-digit number. - Find 10 more or 10 less. - Add and subtract a multiple of 10 to a two-digit number.	Shape - Describe and compare common 2D and 3D shapes. - Know that 2D shapes can be joined to create a 3D shape.	Position and direction - Recognise $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ turns - Rotate themselves and objects about a specific turn. - Use language of clockwise and anticlockwise to describe turn.
Introduction to multiplication - Recognise multiplication as repeated addition. - Recognise equal and unequal groups.	Addition and subtraction of 2-digit numbers - Add two-digit numbers when crossing 10 - Subtract two-digit numbers when crossing 10	Doubling, halving and division Know how to use 2, 5 and 10 times tables to solve division problems.
		Capacity, volume and mass - Use standard units to measure. - Compare mass, length and volume.

Year 3 long term maths plan

Ongoing coverage		
- Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number - Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks - Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight - Know the number of seconds in a minute and the number of days in each month, year and leap year		
Autumn	Spring	Summer
Adding and subtracting across 10 - Know that addends can be added in any order. - Find efficient ways if adding 3 addends within 10. - Add or subtract two numbers that bridge through 10. Know that one addend could be partitioned to create a 'makes 10' strategy.	Right angles - Know what a right angle is. - Know that rectangles and squares have 4 right angles.	Unit fractions - Know what a unit fraction is and how it relates to a whole. - Find a unit fraction of a small quantity. - Order and compare unit fractions by looking at the denominator. - Begin to find unit fractions of an amount related to known multiplication facts.
	Securing mental calculation (addition and subtraction) Use strategies of adjusting, compensation and re-grouping to add and subtract numbers within 1000.	
	Column addition Use column addition to add together two or more values with no regrouping, then regrouping of ones, then tens.	Non-unit fractions - Place fractions on a number line - Compare unit fractions. - Add and subtract unit fractions with the same denominator.
Numbers to 1000 - Know that hundreds can be made from groups of 10, 25, 50 - Bridge 100 by adding and subtracting multiples of 10. - Bridge 100 by adding or subtracting a single digit. - Represent 3-digit numbers in different ways. - Order, compare and position 3-digit numbers.	2, 4 and 8 times tables - Understand the relationship between multiples of 2, 4 and 8. - Use multiples of 2, 4 and 8 to solve multiplication problems. - Scale multiplication facts by 10.	Parallel and perpendicular lines - Investigate properties of 2D shapes. - Draw shapes on isometric paper.
	Column subtraction Subtract without any exchange, then with exchange of tens and then hundreds.	Time - Introduce and use a digital clock. - Know relationships between time shown on a 12-hour digital clock and an analogue clock.

Year 4 long term maths plan

Ongoing coverage		
- Mastering Number daily session - Count backwards through 0 to include negative numbers - Read, write and convert time between analogue and digital 12- and 24-hour clocks - Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days - Recall and use tables facts to 12 x 12		
Autumn	Spring	Summer
Review of addition and subtraction - Secure use of column addition and subtraction strategies. - Use column addition and subtraction to solve different problems. - Identify missing numbers from column addition and subtraction equations. - Recognise when written or mental strategies are most efficient.	7 times tables and patterns - Use strategies to calculate multiples of 7 to 12 x 7. - Use facts to solve division and multiplication problems to 12 x 7.	Fractions greater than 1 - Place unit fractions, and then non-unit fractions, on empty number lines. - Add and subtract fractions with the same denominator within 1 and then across 1. - Convert improper and proper fractions. - Add and subtract proper fractions from or to improper fractions by converting.
Numbers to 10,000 - Know how to read, write and say numbers to 10, 000 - Order, compare and round numbers to 10, 000. - Add and subtract numbers within 10, 000	Understanding and manipulating multiplicative relationships - Know how to calculate using the distributive law. - Recognise what happens when multiplying a number by 10. Recognise what happens when dividing a multiple of 10 by 10. - Recognise what happens when multiplying a number by 100. Recognise what happens when dividing a multiple of 100 by 100.	
Perimeter - Know what perimeter is and how it is measured and calculated. - Find perimeter of rectilinear shapes using addition and multiplication.	Coordinates - Read and plot coordinates on a single quadrant grid. - Draw polygons using coordinates.	Symmetry in 2D shapes - Know what symmetry is and is not. - Complete symmetrical patterns. - Recognise symmetry in 2D shapes.
3, 6 and 9 times tables - Recognise patterns in 3, 6 and 9 times tables and associated facts. - Use known facts to solve multiplication and division problems. - Recognise and use divisibility rules.	Review of fractions - Know that a fraction can be part of a set, group or shape. - Recognise fractions as equal parts of a whole. - Recognise $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$ etc.	Time - read, write and convert time between analogue and digital 12- and 24-hour clocks. - solve problems involving converting units of time.
		Division with remainders - Solve division problems using known facts. - Know what a remainder is. - Recognised when an equation will result in a remainder.

Year 5 long term maths plan

Ongoing coverage		
- Mastering Number daily session - Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] - Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 - Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals		
Autumn	Spring	Summer
Integers to 1,000,000 - Read, write, order and compare numbers to 100, 000 and then to 999,999. - Add and subtract using place value without crossing place value boundaries.	Area and scaling - Know what area is and that area is measured in square cm/m/ km etc. - Measure and calculate the area of rectilinear shapes. - Solve problems involving area.	Fractions - Multiply fractions and mixed numbers by integers. - Find fractions of quantities and values. - Compare and order fractions with common denominators. - Find and calculate equivalent fractions. - Recall and calculate decimal and fraction equivalence.
Decimal fractions - Read, write, order and compare tenths, then hundredths as fractions and decimals. - Add and subtract using efficient mental and written methods using tenths and hundredths.		
Money - Convert units between pounds and pence; compare values. - Add and subtract amounts of money to find totals and find change.	Calculating with decimal fractions - Multiply and divide by 10, 100 and 1000 and explain the effect of this. - Use known multiplication facts to multiply whole numbers by decimals, for example, 0.7×6. - Multiply by 0.1 and relate this to dividing by 10.	Converting units - Recall and use previously learned conversions to solve problems. - Use scaling to convert kilometres into miles and vice versa. - Solve problems including conversions of time.
Negative numbers - Recognise how negative numbers relate to 0 on a number line. - Interpret negative numbers in context.	Factors, multiples and primes - Use commutative and distributive law when multiplying 3 values. - Calculate the volume of a cuboid. - Recognise and calculate cube and square numbers. - Know what a factor, composite number, prime number and multiple is. - Use knowledge of properties of number to solve problems in a range of contexts.	Angles - Use language of degrees when talking about the size of angles. - Use terms acute, reflect, right and obtuse to categorise angles. - Measure angles using a protractor. - Categorise angles after measuring.
Short multiplication and division - Use efficient methods of short division and multiplication in different contexts. - Solve problems with remainders.		

Year 6 long term maths plan

Ongoing coverage		
• Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit • Perform mental calculations, including with mixed operations and large numbers • Any National Curriculum statements regarding measure should be linked to calculation as often as possible.		
Autumn	Spring	Summer
Composition and calculation of numbers to 10 and interpreting negative numbers NCETM 1.30 • Read, write, order and compare numbers to 10 million. Add and subtract mentally and using formal column methods. • Read, interpret and calculate with negative numbers in different contexts.	Using mental and written addition strategies in different contexts. • Secure mental and written methods for solving problems with 2 or more parts. • Calculate answers and missing number problems using whole and decimal values.	SATs preparation
	Multiplication and division involving whole and decimal numbers • Use known scaling and compensation methods to solve problems involving whole and decimal values in context.	
Strategies for multiplying larger numbers NCETM 2.23 • Use of adjustment when multiplying by powers of 10 introduction to long multiplication	Scale factors, ratio and proportional reasoning NCETM 2.27 • Interpret problems which use ratio and scaling. Use multiplication and division to calculate scale factors.	
Angles and measuring of angles Deducing missing angles • Use knowledge of straight lines and the internal and external angles of 2D shapes to deduce values of missing angles.	Shape and geometry • Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area.	Problems with two unknowns: NCETM 1.31 • Know how to identify the value of two or more missing values using the additive and multiplicative relationship between numbers.
Division by 2-digit divisors NCETM 2.24 • Solve context-based problems using short division. • Express remainders as decimals. • Use of formal methods for dividing a value by a 2-digit divisor.	Combining division with addition and subtraction: NCETM 2.28 • Secure written division methods and use in multi-step problems • Use of brackets in calculations.	
	Fractions, decimals and percentages • Use known facts and place value to calculate fractions and percentages of values.	
		Area and perimeter 2 NCETM 2.30 • Find the area of parallelograms and triangles by identifying the perpendicular height. • Compare areas of composite shapes.

Additional information:

Mastering Number:

Mastering Number is our chosen programme for delivering systematic teaching of number facts and multiplicative reasoning for all year groups from Reception to Year 5. Mastering Number sessions take place in classes daily as an addition to the main mathematics lesson.

NCETM Curriculum Prioritisation (CP) Materials:

Our planning is derived from the NCETM CP materials. We follow these in conjunction with other NCETM materials, such as the professional development materials, to support staff subject knowledge and lesson design in a coherent manner.

<https://www.ncetm.org.uk/classroom-resources/cp-curriculum-prioritisation-in-primary-maths/>

Ready to Progress:

When teaching sequences of lessons, the 'Ready to Progress' documentation supports teachers in recognising what the essential and core knowledge children must obtain, or have obtained already, to master the curriculum at a specific year group level. https://assets.publishing.service.gov.uk/media/6140b7008fa8f503ba3dc8d1/Maths_guidance_KS_1_and_2.pdf