Nursery:

Goal- A master of maths- To use embedded mathematical knowledge naturally in their play. Subitising, counting and representing marks up to 5.

Learning in Maths in Nursery is planned to work towards milestones as set out in CHCA's EYFS planning. Activities are planned to allow children working at different stages in their development in maths to make progress and take into account the varying number of session and ages of the children in the Nursery Class.

Maths Goals (CHCA Curriculum)	Milestone	First Milestone	Second Milestone	Third Milestone	Final Milestone
	Number	Begin to recite number names and use basic mathematical language.	With support touch one thing and say number name to count (one to one correspondence) and recognise numerals of personal significance.	Link numerals to amounts up to 5 and show using fingers.	Count items carefully, one to one correspondence up to 5. Use counting to help solve problems and know that the last number counted tells me how many there are in total.
	Shape and Space	Beginning to have an understanding of sizes and spaces.	Explore shapes for building and modelling.	Have a growing awareness of familiar routes and locations and use positional language correctly to describe them.	Talk about, play with and explore common 2D and some 3D shape.

Class 1 – Reception

Goal - A master of maths

Following on from their learning in Reception, pupils in Reception are working towards being a 'Master of Maths' and towards achieving these milestones in the curriculum at CHCA by the end of their time in EYFS.

Maths Goals (CHCA Curriculum)	Milestone	First Milestone	Second Milestone	Third Milestone	Final Milestone
	Number	Subitising, counting and representing marks to 5. To use embedding mathematical knowledge naturally in their play.	• Match numerals to an amount for amounts to 5 and then to 10.	To begin counting beyond 10. Order representations of amounts to 5 and then to 10. To be able to find one more and one less for numbers to 5 and then to 10.	Who can show a deep understanding of numbers to 10, including representation. Recognise patterns within the number system, subitise, compare quantities and recall number bonds to 5 and then to 10.
	Shape and Space		• To explore simple patterns (continue, copy or create) • To recognise and name simple 2D and 3D shapes.		

In Reception, learning in maths, and in Number specifically, is principally structured through the use of NCTEM's Mastering Number program to develop number sense. Children will have daily Mastering Number sessions. Content from the New White Rose scheme of work for Reception will be used to supplement this and provide opportunities for consolidation, deeper learning and challenge with the aim to develop all six key areas of learning in Maths for EYFS: Cardinality and Counting, Comparison, Composition, Pattern, Shape and Space and Measures. Pace and progression using these combined materials will be adapted to flexibly meet the needs of our learners. Learning in maths takes part daily and there are planned opportunites to develop skills during continuous provision.
(Note – the published order of WR Blocks has been changed to mirror the sequence of learning in Mastering Number but maintains the order for progression across number, shape and space respectively).

Mastering Number Year 1 (Termly overview)		
Autumn (Term 1)	Spring (Term 2)	Summer (Term 3)
Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. Pupils will: • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger number connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will: • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games • join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. Pupils will: • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2 • begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek

Autumn Term

White Rose	Getting to know you (2 wks.)		It's me 1,2,3 (2 wks.)		Match, sort and compare (2 wks.)		Talk about measure and patterns (2 wks.)		1,2,3,4,5 (2 wks.)		Circles and triangles (1 wk.)	Shapes with 4 sides (1 wk.)
Mastering Number		Subitise 1,2 and 3. Represent these on their fingers.	Count to 3 Cardinality Counting objects	Composition of numbers – 3 and 4	Subitise 2 and 3. Describe patterns - 4	Comparison – more than. Comparing two sets.	Counting, ordinality and cardinality to 5.	Comparison – more than, fewer than, equal	Composition – whole and parts	Compose and decompose numbers to 5	Counting to 10, matching to 5, numerals to 5	

Spring Term

White Rose	Alive in 5 (2 wks.)		Mass and capacity (1 wk.)	Growing 6,7,8 (2 wks.)		Length, height and time (2 wks.)		Building 9 and 10 (3 wks.)			Explore 3D shapes (2 wks.)
Mastering Number	Numerals 1-5 Matching Conceptual subitising. Dice.	Recognise and order to 5	Composition – partitioning 5	Composition – to 7	Composition – more than, fewer than, equal.	Revisit cardinality, counting 1-30,	Comparison – to 8.	Composition	Conceptual subitising to 8	Composition -similar and different, doubles/not doubles.	

Summer Term

White Rose	To 20 and beyond (2 wks.)		How many now? (1 wk.)	Manipulate, compose and decompose (2 wks.)		Sharing and grouping (2 wks.)		Visualise, build and map (3 wks.)			Make connections (1 wk.)	
Mastering Number	Cardinality, ordering and counting to 20.	Subitising	Composition	Composition – to 10.	Comparison	Subitising on a rekenrek	Comparison	Counting	Composition	Patterns	Recall	

Class 2: Year 1/2

Moving into KS1 in Year 1, pupils will continue to follow the Mastering Number programme. This will be a daily session outside their daily maths lesson and will be delivered as a whole class session by the class teacher. Maths other than Mastering Number, will be planned following blocks from White Rose but adapted to flexibly meet the needs of the learners and with additional morning maths activities to practise number skills. The sequence of blocks has been adapted to use a mastery approach in the mixed age class but pupils will be taught content appropriate for their year group and development.

Mastering Number (Termly overview)

<table>
<tr><td colspan="3">Year 1</td></tr>
<tr><td>Autumn (Term 1)</td><td>Spring (Term 2)</td><td>Summer (Term 3)</td></tr>
<tr><td>Pupils will have an opportunity to consolidate the Early Learning Goals and continue to explore the composition of numbers within 10, and the position of these numbers in the linear number system.
Pupils will:
• subitise within 5, including when using a rekenrek, and re-cap the composition of 5
• develop their understanding of the numbers 6 to 9 using the '5 and a bit' structure
• compare numbers within 10 and use precise mathematical language when doing so
• re-cap the order of numbers within 10 and connect this to '1 more' and '1 less' than a given number explore the structure of even numbers (including that even numbers can be composed by doubling any number, and can be composed of 2s)
• explore the structure of the odd numbers as being composed of 2s and 1 more
• explore the composition of each of the numbers 6, 8, and 10
• explore number tracks and number lines and identify the differences between them</td><td>Pupils will continue to explore the composition of numbers within 10 and explore addition and subtraction structures and the related language (without the use of symbols).
Pupils will:
• explore the composition of each of the numbers 7 and 9
• explore the composition of odd and even numbers, seeing that even numbers can be made of two odd or two even parts, and that odd numbers can be composed of one odd part and one even part
• identify the number that is two more or two less than a given odd or even number, identifying that two more/ less than an odd number is the next/ previous odd number, and two more/ less than an even number is the next/ previous even number explore the aggregation and partitioning structures of addition and subtraction through systematically partitioning and re-combining numbers within 10 and connecting this to the part-part-whole diagram, including using the language of parts and wholes
• explore the augmentation and reduction structures of addition and reduction using number stories, including introducing the 'first, then, now' language structure</td><td>Pupils will explore the composition of numbers within 20 and their position in the linear number system. They will connect addition and subtraction expressions and equations to 'number stories').
Pupils will:
• explore the composition of the numbers 11 to 19 as '10 and a bit' and compare numbers within 20
• connect the composition of the numbers 11 to 19 to their position in the linear number system, including identifying the midpoints of 5, 10 and 15
• compare numbers within 20
• understand how addition and subtraction equations can represent previously explored structures of addition and subtraction (aggregation/ partitioning/ augmentation/ reduction)practise retrieving previously taught facts and reason about these</td></tr>
<tr><td colspan="3">Year 2</td></tr>
<tr><td>Autumn (Term 1)</td><td>Spring (Term 2)</td><td>Summer (Term 3)</td></tr>
<tr><td>Pupils will have an opportunity to consolidate their understanding and recall of number bonds within 10; they will re-cap the composition of the numbers 11 to 20 and reason about their position within the linear number system.
Pupils will:
• review the composition of the numbers 6 to 9 as '5 and a bit'
• compare numbers using the language of comparison and use the symbols < > =</td><td>Pupils will have an opportunity to use their knowledge of the composition of numbers within 10 to calculate within 20; they will explore the links between the numbers in the linear number system within 10 to numbers within 100, focusing on multiples of 10 and the midpoint of 50.
Pupils will:
• explore how the numbers 6 to 9 can be doubled using the '5 and a bit' and '10 and a bit' structure
• use doubles to calculate near doubles</td><td>Pupils will have further opportunities to use their knowledge of the composition of numbers within 10 to calculate within 20 and to reason about equations and inequalities.
Pupils will:
• continue to explore a range of strategies to subtract across the 10-boundary</td></tr>
</table>

• review the structure of even numbers (including exploring how even numbers can be composed of two odd parts or two even parts) and the composition of each of 6, 8 and 10 • review the structure of odd numbers (including exploring how odd numbers can be composed of one odd part and one even part) and the composition of each of 7 and 9 • consolidate their understanding of the numbers 10 and 20 as '10 and a bit' • consolidate their understanding of the linear number system to 20 and reason about midpoints	• use bonds of 10 to reason about bonds of 20, in which the given addend is greater than 10 • use known number bonds within 10 to calculate within 20, working within the 10-boundary • use their knowledge of bonds of 10 to find three addends that sum to 10 • use their knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary • use their understanding of the linear number system to 10 to position multiples of 10 on a 0 - 100 number line and reason about midpoints	• review bonds of 20 in which the given addend is greater than 10, and reason about bonds of 20, in which the given addend is less than 10 • practise previously explored strategies to support their reasoning about inequalities and equations • review doubles and near doubles and transform additions in which two addends are adjacent odd/ even numbers into doubles • consolidate previously taught facts and strategies through continued, varied practice

Using White Rose Mixed Age Plans (new for 24/25)

Autumn	Place Value (within 20)	Addition and Subtraction (within 20)	Place Value (within 100)	Geometry - Shape	
Spring	Addition and Subtraction (within 100)	Multiplication and Division	Length and Height	Statistics	Consolidation
Summer	Money	Fractions	Time	Mass, Capacity and temperature	Geometry - Position and Direction

Class 3: Year 2/3

Pupils will continue to have a morning maths activity to develop their number skills. Pupils in Year 2 will have access to 'Numbots' to focus on individual development of subitising, number bonds and addition and subtraction. Pupils in Year 3 will begin using Times Tables Rockstars to begin building their fluency with understanding and recall of multiplication and division facts. Using heatmaps, their progress will be monitored. Daily maths lessons will use White Rose blocks with children in each year group being taught appropriate content for their year group and development. Order of blocks may be altered slightly to enable children to be taught using a mastery approach.

White Rose:

Autumn Term

Year 2	Place Value	Addition and Subtraction	Shape
Year 3	Place Value	Addition and Subtraction	Shape (Summer)

Place

Spring Term

Year 2	Multiplication and Division		Length and height	Mass, capacity and temperature
Year 3	Multiplication and Division A	Multiplication and Division B	Length and Perimeter	Mass and Capacity

Summer Term

Year 2	Fractions		Money	Time	Statistics	Position and direction
Year 3	Fractions A	Fractions B	Money	Time	Statistics	(Shape)

Class 4: Year 4/5

Pupils will continue to have a morning maths activity to develop their number skills. All pupils will take part in daily mastering number sessions aimed at improving fluency and understanding of times tables. Pupils in both year groups will continue using Times Tables Rockstars to build their fluency recalling multiplication and division facts. Using heatmaps, their progress will be monitored. Pupils in Year 4 will take MTC at the end of the year. Daily maths lessons will use White Rose blocks with children in each year group being taught appropriate content for their year group and development. Order of blocks may be altered slightly to enable children to be taught using a mastery approach.

Mastering Number (Termly overview) (Autumn 2023 start)		
Autumn (Term 1) Weeks 1-10	Spring (Term 2) Weeks 11-20	Summer (Term 3) Weeks 20-30
• Know that a 'unit' can represent 'many as 1' • see that 1 unit can be repeated • represent 1 or more units using unitised counters and multiplication expressions. connect the concept of 'unitising' (seeing 'many as one') to 'doubling' • understand that doubling always involves having two units of the same value. • Know that doubling can be represented by a multiplication expression in which one of the two factors will always be 2. • recalling doubles up to double 10, and use this knowledge to quickly recall multiplication facts where one of the factors is 2. • solve problems that involve repeated units OF 2, rather than 2 UNITS of a number, as well as exploring representations that show how even numbers can be seen either as a composition of 2 equal groups (a double) or as a number of groups OF 2 • double the numbers 11–19, and reason about the digits in the resulting numbers • investigate the number patterns that are produced when a number is doubled, and the resulting number is then doubled. By identifying that the numbers produced in this way are all multiples of 4, pupils will be able to derive some of the products in the 4 times table. • identify arrangements of blocks that make square shapes • identify what happens when two factors that are the same are multiplied together. • practise saying 'factor, factor, product' when the factors are the same	Going for Gold sessions learning multiplication facts: • Recap: this section provides a quick review of previously learned facts to check pupils' recall, using the oral pattern as the initial prompt. • Understand: this section allows pupils to explore, in more depth, the structure of the two focus facts for this week's sessions. Representations are used to expose the structure of the facts (e.g. using arrays and unitised counters to recap that 5 × 9 is equal to 5 × 10 subtract 5). • Explain: in this section, pupils will continue to reason about the fact being explored. They will explain their understanding to others and, where appropriate, support their explanations by drawing, completing or changing a representation. They will also be encouraged to develop and use good number sense to check their answers (e.g. explaining why 7 × 9 gives a product that is less than 70, and why it must be an odd number because at least one of the factors is odd). • Say: this section allows pupils to practise saying the fact using the oral pattern of 'factor, factor, product' alongside the representations used.	• Going for Gold sessions • tailored sessions to revisit/consolidate/address misconceptions including revisiting CMFs that are tricky for the class.

• sort numbers according to whether they are square or not square. reason about the square products for 6 × 6 and 9 × 9. • reason about square products for 7 × 7 and 8 × 8 • reason about how 7 × 7 and 8 × 8 can be represented using unitised counters. • recap products for square facts to 100 • derive the products for 11 × 11 and 12 × 12 • begin to practise retrieving facts in which 2 is a factor • practise recalling the product when two factors are the same • solve multiplication problems using learned facts. • Derive and recall facts from the 12 x table using the connection that 12 x a number is 10x and 2 x the number. • Understand that 9 x a number is 10 x the number subtract 1 x the number • identify that 10 × 12 and 12 × 10 both have the product 120 • recall 12 × 12 and identify the product as a square number • reason about missing digits involving previously learned facts • estimate the position of multiples of 12 in the linear number system.		

White Rose:

Autumn Term

Year 4	Place Value (including Year 5 negative Number)	Addition and Subtraction	Multiplication and Division A/B
Year 5			

Spring Term

Year 4	Fractions	Decimals A	Area	Length and Perimeter	Statistics
Year 5	Fractions A and B	Decimals and percentages	Perimeter and area		

Summer Term

Year 4	Decimals B	Shape	Position and direction	Money	Time	Consolidation – four operations/area
Year 5	Decimals			Converting units		Volume

Class 5: Year 5/6

Pupils will continue to have a morning maths activity to develop their number skills. Pupils in both year groups will continue using Times Tables Rockstars to build their fluency recalling multiplication and division facts. Using heatmaps, their progress will be monitored.. Daily maths lessons will use White Rose blocks with children in each year group being taught appropriate content for their year group and development. Order of blocks may be altered slightly to enable children to be taught using a mastery approach.

White Rose:

New White Rose Mixed Age Planning:

Autumn	Place Value	Addition and Subtraction	Multiplication and Division A	Fractions A	Multiplication and Division B	
Spring	Multiplication and Division B (continued)	Fractions B	Decimals A	Area, Perimeter and Volume	Decimals B	Fractions, Decimals and Percentages

Summer	Ratio	Algebra	Shape	Position and Direction	Statistics	Converting Units