

Cherry Hinton Nursery and Reception Maths Progression



Developing a strong grounding in **number** is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to **count** confidently, **develop a deep understanding of the numbers to 10**, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and mathematical vocabulary. In addition, it is important that the curriculum includes rich opportunities for children to develop their **spatial reasoning skills** across all areas of mathematics including **shape, space and measures**. It is important that children develop positive attitudes and interests in mathematics, look for **patterns and relationships**, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

	Nursery Autumn	Nursery Spring	Nursery Summer	Reception Autumn	Reception Spring	Reception Summer
Maths in the moment.	Counting how many children are in, using 10s frames for self register, counting out snacks, looking at the sequence of the day using visual timetables (sequencing events - next, after, before), using the clock to talk about time, problem solving e.g. there are too many people in the role play corner so how can we sort this problem out?					
Reception ELG	Number	Subitising	Maths mark making	Number	Subitising	Doubling
<p>Number: Have a deep understanding of numbers to 10, including the composition of each number. Subitise up to 5. Automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p> <p>Numerical Patterns Verbally count beyond 20, recognising the pattern of the counting system. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed easily.</p>	<p>Songs/rhymes</p> <p>Number books Recite numbers past 5 Say one number for each item in order 1, 2, 3, 4, 5 Show fingers up to 5</p>	<p>Develop recognition of up to 3 objects.</p> <p>Know that the last number reached when counting tells you the total quantity.</p> <p>Link numerals and amounts</p> <p>Compare quantities using language more than, fewer than.</p> <p>Experiment with their own symbols.</p>	<p>Solve mathematical problems with numbers up to 5 Compare quantities using language more than, fewer than. Talk about 2D and 3D shapes Understand position through words alone. Describe a familiar routine Discuss routes and locations</p> <p>Make comparisons between objects relating to size, length, weight and capacity.</p> <p>Select shapes appropriately for building Combine shapes to make bigger ones Pattern making</p>	<p>songs/rhymes Shape- Not an ELG Length, weight, height, capacity 2D shape Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compose and decompose shapes eg: investigate how shapes can be combined to make new shapes eg: 2 triangles make a square 3D shape Repeating patterns Number of the week Count verbally -objects, actions and sounds.</p> <p>Number recognition Use 5 frames</p> <p>Self register using tens frames Subitising Count objects to 10 and beyond</p>	<p>Compare quantities up to 10 Count objects to 10 and beyond 1 more/ 1 less Number Bonds to 5 Addition Subtraction</p> <p>Money Estimating - problem solving</p>	<p>Halving</p> <p>Sharing</p> <p>Data handling - collecting information and recording it Time Ordering and sequencing familiar events</p>

Mastering Number: Overview of content – Reception

Strand/ Half-term	Subitising	Cardinality, ordinality and counting	Composition	Comparison
<p>1</p> <p>Children will:</p>	<ul style="list-style-type: none"> · perceptually subitise within 3 · identify sub-groups in larger arrangements · create their own patterns for numbers within 4 · practise using their fingers to represent quantities which they can subitise · experience subitising in a range of contexts, including temporal patterns made by sounds. 	<ul style="list-style-type: none"> · relate the counting sequence to cardinality, seeing that the last number spoken gives the number in the entire set · have a wide range of opportunities to develop their knowledge of the counting sequence, including through rhyme and song · have a wide range of opportunities to develop 1:1 correspondence, including by coordinating movement and counting · have opportunities to develop an understanding that anything can be counted, including actions and sounds · explore a range of strategies which support accurate counting. 	<ul style="list-style-type: none"> · see that all numbers can be made of 1s · compose their own collections within 4. 	<ul style="list-style-type: none"> · understand that sets can be compared according to a range of attributes, including by their numerosity · use the language of comparison, including 'more than' and 'fewer than' · compare sets 'just by looking'.

<p>2</p> <p>Children will:</p>	<ul style="list-style-type: none"> continue from first half-term subitise within 5, perceptually and conceptually, depending on the arrangements. 	<ul style="list-style-type: none"> continue to develop their counting skills explore the cardinality of 5, linking this to dice patterns and 5 fingers on 1 hand begin to count beyond 5 begin to recognise numerals, relating these to quantities they can subitise and count. 	<ul style="list-style-type: none"> explore the concept of 'wholes' and 'parts' by looking at a range of objects that are composed of parts, some of which can be taken apart and some of which cannot explore the composition of numbers within 5. 	<ul style="list-style-type: none"> compare sets using a variety of strategies, including 'just by looking', by subitising and by matching compare sets by matching, seeing that when every object in a set can be matched to one in the other set, they contain the same number and are equal amounts.
<p>3</p> <p>Children will:</p>	<ul style="list-style-type: none"> increase confidence in subitising by continuing to explore patterns within 5, including structured and random arrangements explore a range of patterns made by some numbers greater than 5, including structured patterns in which 5 is a clear part experience patterns which show a small group and '1 more' continue to match arrangements to finger patterns. 	<ul style="list-style-type: none"> continue to develop verbal counting to 20 and beyond continue to develop object counting skills, using a range of strategies to develop accuracy continue to link counting to cardinality, including using their fingers to represent quantities between 5 and 10 order numbers, linking cardinal and ordinal representations of number. 	<ul style="list-style-type: none"> continue to explore the composition of 5 and practise recalling 'missing' or 'hidden' parts for 5 explore the composition of 6, linking this to familiar patterns, including symmetrical patterns begin to see that numbers within 10 can be composed of '5 and a bit'. 	<ul style="list-style-type: none"> continue to compare sets using the language of comparison, and play games which involve comparing sets continue to compare sets by matching, identifying when sets are equal explore ways of making unequal sets equal.

<p>4</p> <p>Children will:</p>	<ul style="list-style-type: none"> · explore symmetrical patterns, in which each side is a familiar pattern, linking this to 'doubles'. 	<ul style="list-style-type: none"> · continue to consolidate their understanding of cardinality, working with larger numbers within 10 · become more familiar with the counting pattern beyond 20. 	<ul style="list-style-type: none"> · explore the composition of odd and even numbers, looking at the 'shape' of these numbers · begin to link even numbers to doubles · begin to explore the composition of numbers within 10. 	<ul style="list-style-type: none"> · compare numbers, reasoning about which is more, using both an understanding of the 'howmanyness' of a number, and its position in the number system.
<p>5</p> <p>Children will:</p>	<ul style="list-style-type: none"> · continue to practise increasingly familiar subitising arrangements, including those which expose '1 more' or 'doubles' patterns · use subitising skills to enable them to identify when patterns show the same number but in a different arrangement, or when patterns are similar but have a different number · subitise structured and unstructured patterns, including those which show numbers within 10, in relation to 5 and 10 · be encouraged to identify when it is appropriate to count and when groups can be subitised. 	<ul style="list-style-type: none"> · continue to develop verbal counting to 20 and beyond, including counting from different starting numbers · continue to develop confidence and accuracy in both verbal and object counting. 	<ul style="list-style-type: none"> · explore the composition of 10. 	<ul style="list-style-type: none"> · order sets of objects, linking this to their understanding of the ordinal number system.

6	his half-term, the children will consolidate their understanding of concepts previously taught through working in a variety of contexts and with different numbers.
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