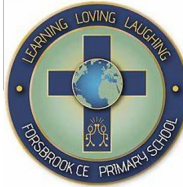


FORSBROOK CE PRIMARY MATHEMATICS

NCETM Mastering Number · Reception overview

These termly overviews are produced by the NCETM (National Centre for Excellence in the Teaching of Mathematics) for its Mastering Number programme. The wording is the NCETM's; the layout follows our school design.

	Term 1	Term 2	Term 3
Overview	<p>Pupils will build on previous experiences of number, and further develop their subitising and counting skills. They will explore the composition of numbers within 5, and connect the concept of 'parts' and 'whole' to objects and number. They will develop skills in noticing and visualising and begin to compare sets of objects and use the language of comparison.</p> <p>As they move themselves through space, they will develop their understanding of relevant spatial language.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers • connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' and 'parts' when talking about objects and numbers • use gestures to develop their understanding and use of a range of spatial language, including the prepositions: in, on, under, next to, between, in front of, and behind, and language related to movement, including: turn, flip 	<p>Pupils will continue to develop skills in noticing and visualising; sorting shapes according to their attributes. They will develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to explore and identify when objects or sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • continue to notice similarities and differences • identify and describe some 2D and 3D shapes • 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, initially with blocks and then when comparing numbers up to 10 • 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 	<p>Pupils will continue to develop their skills in noticing and visualising, when engaging with pattern work. They will apply their understanding of equal/not equal and prepositional language when working with a range of measures. They will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. Pupils will secure knowledge of number facts through varied practice.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • explore a range of pattern making skills, copying, continuing and creating their own patterns • 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 lengths, heights and mass, noticing similarities and differences and using prepositional language to describe these • 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



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NCETM Mastering Number · Year 1 overview

	Term 1	Term 2	Term 3
Overview	<p>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.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>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).</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>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'.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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
Ready-to-progress criteria	<p>This term will build and consolidate the Early Learning Goals and support the teaching and consolidation of the following RtP criteria:</p> <p>1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</p> <p>1NF-1 Develop fluency in addition and subtraction facts within 10.</p> <p>1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$.</p>	<p>This term will particularly support the teaching and consolidation of the following RtP criteria:</p> <p>1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</p> <p>1NF-1 Develop fluency in addition and subtraction facts within 10.</p>	<p>This term will particularly support the teaching and consolidation of the following RtP criteria:</p> <p>1AS-2 Read, write and interpret equations containing addition (+), subtraction (−) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</p> <p>1NF-1 Develop fluency in addition and subtraction facts within 10.</p> <p>1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$.</p>
Spatial reasoning (optional)	<p>In spatial reasoning, pupils will:</p> <ul style="list-style-type: none"> organise objects in space visualise and retrieve familiar patterns of number visualise, mentally transform and see mathematical relationships and structures in a well-structured image 	<p>In spatial reasoning, pupils will:</p> <ul style="list-style-type: none"> generate a mental representation see mathematical relationships and structures in a well-structured image mentally organise, arrange and transform a representation 	<p>In spatial reasoning, pupils will:</p> <ul style="list-style-type: none"> visualise spatial relationships identify structure in representations mentally organise, arrange and transform a representation

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NCETM Mastering Number · Year 2 overview

	Term 1	Term 2	Term 3
Overview	<p>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.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 $<$ $>$ $=$ 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 both 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 	<p>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.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 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 	<p>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.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> continue to explore a range of strategies to subtract across the 10-boundary 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
Ready-to-progress criteria	<p>This term will particularly support the teaching and consolidation of the following RtP criteria:</p> <p>1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$.</p> <p>2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p>	<p>This term will particularly support the teaching and consolidation of the following RtP criteria:</p> <p>2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.</p> <p>2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p> <p>2AS–1 Add and subtract across 10.</p>	<p>This term will particularly support the teaching and consolidation of the following RtP criteria:</p> <p>2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p> <p>2AS–1 Add and subtract across 10.</p> <p>2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?".</p>
Spatial reasoning (optional)	<p>In spatial reasoning, pupils will:</p> <ul style="list-style-type: none"> hold an image in mind for a short period and recreate it identify and describe geometric structures in images physically organise and mentally transform representations 	<p>In spatial reasoning, pupils will:</p> <ul style="list-style-type: none"> mentally organise, arrange and transform a representation generate a mental representation visualise, mentally transform and see mathematical relationships and structures in a well-structured image 	<p>In spatial reasoning, pupils will:</p> <ul style="list-style-type: none"> visualise spatial relationships identify structure in representations mentally organise, arrange and transform a representation