Fluency 23-24

 At SS. Peter and Paul Catholic Primary, teachers in Reception and KS1, deliver a daily session of 10 to 15 minutes in addition to their daily maths lesson, of Mastering Number. This is a programme offered in 2023/24 by the National Centre for Excellence in the Teaching of Mathematics (NCETM). It aims to develop solid number sense, including fluency and flexibility with number facts, which will have a lasting impact on future learning for all children. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Children in KS2 who are not secure in these areas have further opportunities through small group support.

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| ReceptionTerm 1 (Mastering Number) | Term 2 | Term 3 |
| 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 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’ when talking about objects which have parts
 | 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: * 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
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| Year 1/2 Mastering NumberTerm 1 | Term 2 | Term 3 |
| 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
 | 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
 | 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
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| Y2/3 Mastering number Term 1 | Term 2 | Term 3 |
| * 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 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
 | * 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
 | * 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
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