Ashbury Meadow Primary School Mathematics Curriculum **Progression in Number and Place Value**

Year Group	Knowledge and Skills Supporting Resources: Maths No Problem Essential & most valuable knowledge for the next key stage is highlighted in yellow	Vocabulary
Nursery	**Begins to recognise numbers 1-3**. Begins to compare quantities e.g. group, lots, more, same or less. Begins to understand the language of time within the daily routine linked to timetable. **Demonstrates recognition of numbers to 3** e.g. I have 3 apples on my plate. Begins to recite numbers to 5 in order - singing number rhymes and getting involved with props and actions. Uses some number names in play with some accuracy and begins to **represent numbers in different ways** e.g. their fingers and marks. **Recites numbers in order to 5.** **Uses objects to count with 1-1 up to 3.** Fast recognition of up to 1 and 2 -**subitising**. Confidently recites numbers in order up to 5. Begins to **solve problems separating a group of 3 or 4 objects in different ways**, understanding that the total is still the same e.g. link to veg patch or garden implement language of fewer or more. **Begins to subitise to 3.** Counts with 1-1 to 5 (finger numbers, objects) and matches numeral to quantity to 5 e.g can you put 5 animals in the zoo? When counting begins to know the cardinal number. Recites numbers past 5. Shows an interest in number problems – shares a picnic with numbers up to 5. 5 uses comparative language more/fewer. I have fewer cakes than you. **Recites numbers past 5.**	
Reception	**Subitising** within 4. Children to perceptually subitise using patterns of 2,3 and 4 in lines, diagonals or in a triangular arrangement. Verbally counting to 5 with a focus on cardinality and counting strategies with a focus on 1-1 correspondence. **Composition** to 4. Children to know that all numbers are made of ones- supported by Number blocks/unfix cubes. **Cardinality** and counting beyond 5. For children continue to develop their counting skills and explore the cardinality of 5 by linking to dice patterns and to digits/fingers on their hands. Children to begin to recognise numerals relating to these quantities they can subitise and count.	number zero, one, two, three… to twenty and beyond zero, ten, twenty… one hundred none how many…? count, count (up) to count on (from, to) count back (from, to) count in ones, twos… tens… more, less, many, few odd, even every other how many times? pattern, pair guess how many, estimate nearly, close to, about the same

	Comparison by matching. For children to compare sets using a variety of strategies e.g. just looking and subitising. To compare sets also 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. **Composition** by focusing on the concept of a "whole" and the make-up of 5. **Subitising** with a focus on linking amounts to 5 with numerals. At this point, children's confidence should be increasing as they recognise both structured and random arrangements. This skill will then encourage them to notice "one more" than a number. **Ordinality** in numbers to 5. For children to order numbers to 5 with a particular emphasis on each number being "one more" than the previous number. Exploring the **composition** of numbers to 6 by recalling "missing" or "hidden" parts of numbers. This is by splitting numbers (the whole) into two smaller numbers (parts) which is referred to as the part-part-whole model. Children will begin to see that numbers within 10 can be composed of "5 and a bit". To continue to **compare** sets by matching, identifying when sets are equal. If sets are unequal, children can explore ways of making them equal or the "same". For **cardinality, ordinality and counting** the children will continue to consolidate their understanding by working with larger numbers within 10. They will begin to become more familiar with the counting pattern up to 20 and beyond. The children will also continue to explore the **composition** of odd and even numbers with a strong emphasis on the "shape" of the numbers. These even numbers will then be linked to doubles. Children will continue to **compare** numbers with a focus on their reasoning skills e.g. which one is more? Children will continue to practise increasingly familiar **subitising** arrangements, including those which expose '1 more' or 'doubles' patterns. They will 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. Children will subitise structured and unstructured patterns, including those which show numbers within 10, in relation to 5 and 10. They will be encouraged to identify when it is appropriate to count and when groups can be subitised. Children will continue to develop verbal counting to 20 and beyond, including **counting** from different starting numbers They Continue to develop confidence and accuracy in both verbal and object counting. In connection with our topic children will have the opportunity to revisit comparisons of size through discussions around different animals they are learning about.	as just over, just under too many, too few, enough, not enough the same number as, as many as of two objects/amounts: greater, more, larger, bigger less, fewer, smaller of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third… tenth last, last but one before, after next between above, below

	During their final half-term, the children will consolidate their understanding of number concepts through regular problems solving activities that require them to put their knowledge and skills into use in a range of contexts. They will have full confidence to verbalise their reasoning and may sometimes show this using marks or writing number sentences. This will support them in their transition ahead to year one where they will revisit these skills in the Autumn term. End Point – ELG Number ELG Children at the expected level of development will: • Have a deep understanding of number to 10, including the composition of each number; • Subitise (recognise quantities without counting) up to 5; • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Numerical Patterns ELG Children at the expected level of development will: • 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 equally.	
Year 1	**Numbers to 10** ● To be able to count numbers to 10 accurately – forward and backward. ● To be able to count similar objects up to 10 with accuracy and fluency. ● To be able to write all numbers to 10 with numerals and in words; to count only objects of the same name in a group. ● To be able to understand what zero represents and use it when counting. ● To be able to compare different sets of objects and say which one has fewer, more or is equal. ● To be able to order numbers to 10 and know which number is greater or is lesser in value. ● To compare numbers using the terms '1 more' and '1 less'. **Numbers to 20** ● To count numbers up to 20. ● To recognise, read and write numbers up to 20 in words and numerals. ● To use the terms 'greater than' or 'less than' to compare numbers within 20. ● To be able to arrange numbers up to 20 in ascending and descending order. ● To look for patterns with numbers up to 20, focusing on one more and one less than a number.	*As above, plus:* numbers 0–10 digit count forwards count backwards ten-frame even numbers odd numbers take away counting on counting back more than less than fewer as many as

	Numbers to 40 ● To use the making 10 strategy to count numbers above 10; to represent numbers on a number line. ● To use the ten-frame method of organisation and place-value cards to assist pupils in writing numbers to 40; to encourage multiple ways of counting, including counting by 2, 5 and 10. ● To understand that digits represent tens and ones; to represent numbers using Base 10 materials and numbers. ● To use place value to compare two or three numbers and determine which number is bigger/smaller; to arrange three numbers in order of size. ● To compare numbers using number bonds, 100-squares and number lines to determine how much more/less. ● To observe and use number patterns; to see number lines in conjunction with number squares in order to create visual proportionality. **Numbers to 100** ● To count in sequences of 10 followed by counting ones; to increase confidence with number lines and Base 10 materials in order to count numbers to 100. ● To understand the value of the tens and ones digits in a number; to use multiple methods of representing and constructing a number. ● To review and extend skills and strategies related to number comparison; to place numbers in order from smallest to greatest and vice versa. ● To see patterns of numbers when increasing or decreasing by 1, 2 or 5. ● To use a number line, a 100-chart and Base 10 materials to represent numbers. Y1 National Curriculum End Point: Pupils should be taught to: - count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens - given a number, identify one more and one less - identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least - read and write numbers from 1 to 20 in numerals and words.	equal to greater greatest smaller smallest more more than less less than 1 more 1 less
Year 2	**Numbers to 100** ● To count numbers up to 100 using concrete objects: counting up by ones and tens. ● To understand each digit in a number has its own value. ● To be able to compare numbers using place-value knowledge gained from previous lessons.	*As above, plus:*

	• To use the number bond strategy to deepen understanding of place value. • To count in ones and tens; to introduce boundary crossing using tens and ones. • To recognise and describe patterns with more complex numbers, in particular 3 and 5. • To use place-value knowledge to think about the effects of each digit in a number Y2 National Curriculum End Point: Pupils should be taught to: - count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward - recognise the place value of each digit in a two-digit number (tens, ones) - identify, represent and estimate numbers using different representations, including the number line - compare and order numbers from 0 up to 100; use and = signs - read and write numbers to at least 100 in numerals and in words - use place value and number facts to solve problems.	
Year 3	**Numbers to 1 000** • To learn to count in hundreds and understand the place value. Pupils will also understand how many hundreds are needed to make 1000. • To compose and decompose numbers consisting of hundreds, tens and ones. • To understand the value of each digit in a 3-digit number. • To be able to compare and order numbers. • To be able to count in fifties. • To recognise, describe and continue a number pattern. • To be able to recognise, describe and complete more complicated number patterns. • To be able to count in fours and eights. Y3 National Curriculum End Point: Pupils should be taught to: - count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) - compare and order numbers up to 1000 - identify, represent and estimate numbers using different representations - read and write numbers up to 1000 in numerals and in words - solve number problems and practical problems involving these ideas	*As above, plus:* hundreds, relationship, one hundred more, one hundred less, approximate, approximately, method, equation, investigate, question, greatest value, least value, show your working

Year 4	**Numbers to 10 ,000** ● To count in hundreds and twenty-fives. ● To count in thousands. ● To count in thousands, hundreds, tens and ones. ● To use an understanding of place value to count. ● To understand place value in a 4-digit number. ● To compare and order numbers. ● To compare and order 4-digit numbers. ● To make number patterns (100, 10, 1 more and less). ● To make number patterns (4-digit numbers). ● To count in sixes, sevens and nines. ● To round numbers to the nearest 1000. ● To round numbers to the nearest 10, 100 and 1000. ● To round numbers to estimate. ● To round numbers to estimate. **Roman Numerals 1 to 100** ● To write Roman numerals (to 20). ● To write Roman numerals to 100. Y4 National Curriculum End Point: Pupils should be taught to: - count in multiples of 6, 7, 9, 25 and 1000 - find 1000 more or less than a given number - count backwards through zero to include negative numbers - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) - order and compare numbers beyond 1000 - identify, represent and estimate numbers using different representations - round any number to the nearest 10, 100 or 1000 - solve number and practical problems that involve all of the above and with increasingly large positive numbers - read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	*As above, plus:* thousands ten thousand hundred thousand million four-digit-number one thousand more or less round to the nearest hundred integers positive negative above/below zero minus next, consecutive sort, classify property justify make a statement
Year 5	**Numbers to 1 000 000** ● To read and represent numbers to 100 000.	*As above, plus:*

	• To read and represent numbers to 1 000 000. • To read and represent numbers to 1 000 000 using number discs. • To compare numbers to 1 000 000 using place value. • To compare numbers to 1 000 000 using pictorial representations and proportionality. • To compare numbers to 1 000 000 from pictorial representations, using lists and number lines. • To make and identify patterns in numbers using knowledge of place value. • To make number patterns that decrease in multiples of 10 000 or 100 000. • To round numbers to the nearest 10 000 using number lines and bar graphs. • To round numbers to the nearest 100 000 using number lines and bar graphs. • To round numbers to the nearest 100, 1000, 10 000 and 100 000 using number lines. **Roman Numerals to 1000** • To write Roman numerals to 1000. • To write numbers in their thousands in Roman numerals Y5 National Curriculum End Point: Pupils should be taught to: - read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit - count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 - interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero - round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 - solve number problems and practical problems that involve all of the above - read Roman numerals to 1000 (M) and recognise years written in Roman numerals	≥, greater than or equal to ≤ less than or equal to ascending/descending order ≈ is approximately equal to round to the nearest thousand formula square number one squared, two squared, strategy reasoning
Year 6	**Numbers to 10 000 000** • To construct and record numbers to 10 000 000; to recognise the value of digits to 10 000 000. • To compare numbers to 10 000 000 using place value. • To compare and order numbers to 10 000 000; to create combinations of numbers using a fixed number of digits. • To round numbers to 10 000 000 to the nearest million, hundred thousand and ten thousand. • To round numbers to the nearest appropriate number up to and including millions; to determine when rounding is appropriate and to which value. **Negative Numbers**	*As above, plus:* factorise, prime, prime factor, identical

	● To add and subtract negative numbers using a number line. ● To create number stories using negative numbers. Y6 National Curriculum End Point: Pupils should be taught to: - read, write, order and compare numbers up to 10 000 000 and determine the value of each digit - round any whole number to a required degree of accuracy - use negative numbers in context, and calculate intervals across zero - solve number and practical problems that involve all of the above	