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| **Progression in the teaching of place value** | | | |
| **EYFS** | **Y1** | **Y2** | **Y3** |
| **Understanding 10** | **Understanding numbers to 20** | **Understanding numbers up to 100** | **Understanding numbers up to 1000** |
| They will learn to count forwards and backward to ten and represent this using fingers and equipment.  http://teacher.mathsnoproblem.co.uk/samples/Textbook%201A/Chapter1_p2.png  To gain a greater knowledge of number order, children will be aware of numbers that are missed or muddled up when counting forwards and backwards to 10.  They will be counting using one-to-one correspondence.  They will learn to represent this number on a tens frame. But also understanding that the number is the same even when objects are moved.    Pupils will create number stories for each number to gain a real sense of the number. They will represent the numbers in a variety of ways:  Whole Part-Part  4_NSPM_UK_1A_Chapter2_HighRes_p3[1]  Numicom  Image result for numicon 5  Counting objects  Image result for numicon 5  Tallies and marks  Image result for tallies to 5  Pupils begin to compare numbers using the terms greater than, less than and as many as.  Pupils will begin to find 1 more/less and 2 more/less.  3_NSPM_UK_1A_Chapter1_HighRes_p21[1]    Pupils explore which numbers are greatest and smallest in a series, and order numbers to show value.  8_NSPM_UK_1A_Chapter6_HighRes_p15[1] | They will be counting using one-to-one correspondence and will use ten frames to represent numbers up to 20.  8_NSPM_UK_1A_Chapter6_HighRes_p4[1]  Pupils will explore different ways of making the same number, using the part-part whole model  4_NSPM_UK_1A_Chapter2_HighRes_p3[1]  Pupils are introduced to the concept of 0 by counting backwards from numbers below 10.  Pupils begin to compare numbers using the terms greater than, less than and as many as.  3_NSPM_UK_1A_Chapter1_HighRes_p21[1]    3_NSPM_UK_1A_Chapter1_HighRes_p21[1]  Pupils explore which numbers are greatest and smallest in a series, and order numbers to show value.  8_NSPM_UK_1A_Chapter6_HighRes_p15[1] | Pupils continue to develop their number sense using a variety of resources. They will be able to count to 100 through different steps, including counting up in tens. Pupils will also look at comparing numbers using their place-value knowledge and they will go through number bonds. They will also explore numbers to see patterns within 100.  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%202A/NSPM_UK_2A_Chapter1_HiRes_p6.png  Place value mat and base 10  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%202A/NSPM_UK_2A_Chapter1_HiRes_p6.png  Part-part-whole model  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%202A/NSPM_UK_2A_Chapter1_HiRes_p14.png  Number tracks and number lines to support pattern recognition  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%202A/NSPM_UK_2A_Chapter1_HiRes_p18.png  Hundred squares to support pattern recognition in numbers to 100.  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%202A/NSPM_UK_2A_Chapter1_HiRes_p12.png  Pupils start to think flexibly and find other ways to partition numbers  Pupils are able to represent the same number using a variety of different equipment. For example the number 24 can be shown with:  Arrow cards  [Image result for arrow cards 20 mathsImage result for arrow cards 20 maths](https://www.google.co.uk/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiNwNWPtqfVAhUFLVAKHd_RD0QQjRwIBw&url=http://www.autopresseducation.co.uk/place-value/187-child-s-place-value-arrows-htu.html&psig=AFQjCNGzehcSLowPLlL_yDiad2YkAUkFAw&ust=1501174789284982)  Coins    Place value counters    Numicon    Tens frame | When learning about place value  Year 3 will focus on the value of each digit in numbers up to 1000. Pupils will learn how to compose and decompose numbers, compare, order and look for patterns.  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%203A/NSPM_UK_3A_Chapter1_HIRES_p2.png  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%203A/NSPM_UK_3A_Chapter1_HIRES_p16.png  Pupils will count a variety of objects to count in 50s and 100s. This can be support through the use of number-lines.  https://mathsnoproblem.com/wp-content/uploads/samples/Textbook%203A/NSPM_UK_3A_Chapter1_HIRES_p9.png  Pupils represent the numbers using base 10, place value mats, arrow cards and part-part-whole model.  They can write addition sentences to show their understanding of the value of each number.  NSPM_UK_3A_Chapter1_HIRES_p21[1]  NSPM_UK_3A_Chapter1_HIRES_p21[1]  Support by the base 10 or place value counters, pupils can find 100/10/1 more or less than given numbers.  Using these resources pupils can spot patterns to think flexibly and begin to partition them in different ways.  242 = 200 + 40 + 2  242 = 200 + 30 + 12  242 = 200 + 20 + 22  242 = 200 + 10 + 32 |

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| **Progression in the teaching of place value** | | |
| **Y4** | **Y5** | **Y6** |
| **Numbers to 10,000** | **Numbers to 1000,000**  **(including decimals)** | **Numbers to 10million (including decimals)** |
| Pupils will learn about place value to 4 digits and they will link numbers in numerals and in words. They will compare numbers using language such as 'greater', 'smaller', 'less' and 'more', using the mathematical symbols <, > and =. They will use their knowledge of number and place value to help complete number patterns.  MNP_UK_4A_1_HiRes_V2_p11[1]  Pupils will be able to use the base 10 and place value counters to represent 4 digit numbers, recognising the value of each digit.  They can write addition sentences to show their understanding of the value of each number.  They can use the equipment alongside a place value chart to compare numbers, recognising the largest or smallest number.    They are then able to recognise their place on a numberline to support their comparisons.    MNP_UK_4A_1_HiRes_V2_p25[1]    Pupils can use the place value equipment to find 1, 10, 100 or 100 more/less than a given number. They recognise what changes and what stays the same.  MNP_UK_4A_1_HiRes_V2_p28[1] | Pupils look at numbers and their place value to 1 000 000. Time is spent using concrete materials to represent numbers including number counters and place-value charts. Pupils then compare numbers to 1 000 000 using their knowledge of place value.  NSPM_UK_5A_1_HiRes_p3[1]  Pupils can use arrow cards and place value counters to represent the numbers, understanding how their place determines the value.  NSPM_UK_5A_1_HiRes_p8[1]  They can use the bar model to support them when comparing numbers.  NSPM_UK_5A_1_HiRes_p26[1] | In Y6, pupils are refining their knowledge of place value, working with numbers between 1 000 000 and 10 000 000. They will read and write numbers to 10 000 000 using number discs, numerals and words.  03_MNP%20UK%20Textbook%206A%20Chap1_p6[1]  Pupils can use arrow cards and place value counters to represent the numbers (up to 10 million), understanding how their place determines the value.  ‘*The digit 5 is in the millions place, it stands for 5 million’*  03_MNP%20UK%20Textbook%206A%20Chap1_p6[1] |
|  | Pupils can use the place value counters to investigate decimal numbers. They learn to read and write them, recognising their value. They can compare decimals, recognising the largest and smallest. They will use the base 10 equipment to understand tenths, hundredths and thousandths before representing decimals using the place value counters  06_MNP%20UK%20Textbook%206A%20Chap4_p4[1] | |

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| **RESOURCES for the teaching of place value** | | | |
| **EYFS** | **Y1** | **Y2** | **Y3** |
| **Understanding 10** | **Understanding numbers to 20** | **Understanding numbers up to 100** | **Understanding numbers up to 1000** |
|  | 0–10 digit cards  0–20 number lines  0–20 number tracks  0–20 word cards  Base 10 materials – ones, tens cubes  Ten frames Counters | 0–9 digit cards 100-square  Blank number tracks  part–whole diagrams  Objects for counting/counters (100) Place-value charts to 100 Tens and ones (PV counters / Base 10) | Base 10 materials to 1000  Blank number tracks  part–whole diagrams  Number lines & track (in fifties)  Objects for counting (100) Part–whole model (three ways)  Place-value cards  Place-value charts  Straws bundled into fifties |

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| **RESOURCES for the teaching of place value** | | |
| **Y4** | **Y5** | **Y6** |
| **Numbers to 10,000** | **Numbers to 1000,000**  **(including decimals)** | **Numbers to 10million (including decimals)** |
| 100-square  Digit cards  Base 10  Number lines (in thousands)  Number lines (marked and blank)  Number lines in hundreds; twenty-fives and fifties  Place-value cards  Place-value charts  Place-value counters | 1–9 digit cards  Blank number lines (increments marked)  Place-value charts  Place-value counters  Base 10 materials  Counters  Decimal strips  Linking cubes (between two) | 0–9 digit cards Blank number line (increments marked)  Place-value charts  Place-value counters  Base 10 materials  Calculators  Place-value cards |