

## Year 6 Number and Place Value Learning Journey

Ready to Progress

Non-statutory guidance for key skills and knowledge needed

Resources, ideas and assessment questions available in the Maths Guidance NCETM

| Year 5 Prior Learning                                                                                                                                                         | Year 6                                                                                                                                                                                             | NCETM |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.                                                                           | Read, write, order and compare numbers to at least 10,000,000 and determine the value of each digit.                                                                                               |       |
| ✓ Understand place value up to 7 digits                                                                                                                                       | ✓ Read and write numbers up to and including 8 digits                                                                                                                                              |       |
| ✓ Order numbers up to and including 7 digits                                                                                                                                  | ✓ Compare and order numbers up to and including 8 digits                                                                                                                                           |       |
| ✓ Read and write numbers up to and including 7 digits                                                                                                                         | ✓ Understand place value up to 8 digits                                                                                                                                                            |       |
| Round any number to 1,000,000 to the nearest 10, 100, 1000, 10 000 and 100 000                                                                                                | Round any number to 10,000,000 to the nearest 10, 100, 1000, 10 000, 100 000 and 1,000,000                                                                                                         |       |
| ✓ Round any number to the nearest 10                                                                                                                                          | ✓ Round any number to the nearest 10                                                                                                                                                               |       |
| ✓ Round any number to the nearest 100                                                                                                                                         | ✓ Round any number to the nearest 100                                                                                                                                                              |       |
| ✓ Round any number to the nearest 1000                                                                                                                                        | ✓ Round any number to the nearest 1000                                                                                                                                                             |       |
| ✓ Round any number to the nearest 10,000                                                                                                                                      | ✓ Round any number to the nearest 10,000                                                                                                                                                           |       |
| ✓ Round any number to the nearest 100,000                                                                                                                                     | ✓ Round any number to the nearest 100,000                                                                                                                                                          |       |
|                                                                                                                                                                               | ✓ Round any number to the nearest 1000,000                                                                                                                                                         |       |
| Recognise the place value of each digit in numbers with up to 2 decimal places, and compose numbers with up to 2 decimal places using standard and non-standard partitioning. | Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. |       |
| Read, write, order and compare decimals up to 3 decimal places                                                                                                                | Identify the value of each digit in numbers up to 3 decimal places                                                                                                                                 |       |
| ✓ Identify the place value for each digit up to 3 decimal places                                                                                                              | ✓ Identify the place value for each digit up to 3 decimal places                                                                                                                                   |       |
| ✓ Read and write numbers up to 3 decimal places                                                                                                                               | ✓ Identify decimals as fractions                                                                                                                                                                   |       |
| ✓ Compare and order 3 decimal places                                                                                                                                          | ✓ Partition decimal numbers using standard and non standard ways                                                                                                                                   |       |
| ✓ Compare and order mixed decimals (up to 3 decimal places)                                                                                                                   |                                                                                                                                                                                                    |       |
| ✓ Partition decimal numbers using standard and non standard ways                                                                                                              |                                                                                                                                                                                                    |       |

| Year 5 Prior Learning                                                                                                                                                                                   | Year 6                                                                                                                                                                                                                               | NCETM |
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| Reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. | Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round any numbers, as appropriate, including in contexts.                                                    |       |
| Round decimals with 2 decimal places to the nearest whole number to 1 decimal place.                                                                                                                    | Round decimals with 3 decimal places to the nearest whole number to 1 or 2 decimal places.                                                                                                                                           |       |
|                                                                                                                                                                                                         | Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). |       |
| Multiply and divide whole numbers and those with decimals by 10, 100 and 1000                                                                                                                           | Multiply and divide whole numbers and those with decimals by 10, 100 and 1000                                                                                                                                                        |       |
| ✓ Multiply whole numbers by 10, 100 and 1000                                                                                                                                                            | ✓ Multiply whole numbers by 10, 100 and 1000                                                                                                                                                                                         |       |
| ✓ Divide whole numbers by 10, 100 and 1000                                                                                                                                                              | ✓ Divide whole numbers by 10, 100 and 1000                                                                                                                                                                                           |       |
| ✓ Multiply numbers with decimals by 10, 100 and 1000                                                                                                                                                    | ✓ Multiply numbers with decimals by 10, 100 and 1000                                                                                                                                                                                 |       |
| ✓ Divide numbers with decimals by 10, 100 and 1000                                                                                                                                                      | ✓ Divide numbers with decimals by 10, 100 and 1000                                                                                                                                                                                   |       |
| Identify multiples and factors, including finding all factor pairs of a number and common factors of 2 numbers                                                                                          | Identify common factors, common multiples and prime numbers                                                                                                                                                                          |       |
| ✓ Know and identify multiples of a number                                                                                                                                                               | ✓ Know and identify multiples and common multiples of a number                                                                                                                                                                       |       |
| ✓ Know the identity of factors of numbers                                                                                                                                                               | ✓ Know the identity of factors of numbers                                                                                                                                                                                            |       |
| ✓ Find common factors of 2 numbers                                                                                                                                                                      | ✓ Know the meaning of prime number and recall the prime numbers less than 20                                                                                                                                                         |       |
| Know and use the vocabulary of prime number, prime factors and composite numbers                                                                                                                        | ✓ Know the prime factors of a given number                                                                                                                                                                                           |       |
| ✓ Know the meaning of prime number and recall the prime numbers less than 20                                                                                                                            |                                                                                                                                                                                                                                      |       |
| ✓ Know the prime factors of a given number                                                                                                                                                              |                                                                                                                                                                                                                                      |       |
| ✓ Know how to test if a number up to 100 is prime                                                                                                                                                       |                                                                                                                                                                                                                                      |       |
| Recognise and use squared and cubed numbers and the notation                                                                                                                                            | Use squared and cubed numbers and the notation                                                                                                                                                                                       |       |
| ✓ Know and identify square                                                                                                                                                                              |                                                                                                                                                                                                                                      |       |

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| numbers                                                                                                                              |                                                                     |  |
| ✓ Know and identify cubed numbers                                                                                                    |                                                                     |  |
| Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. | Use negative numbers in context and calculate intervals across zero |  |
| ✓ Count forward and backward in whole number steps including negative nos.                                                           | ✓ Calculate numbers across zero                                     |  |
| ✓ Count forward and backwards through 0                                                                                              | ✓ Understand and use negative numbers in context                    |  |
| ✓ Understand and use negative number in context, including temperatures below 0                                                      |                                                                     |  |