

## Year 5 National Curriculum Maths objectives

### Place value:

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| 1. Read, write, order & compare numbers to at least 1 000 000 and determine the value of each digit.  |
| 2. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 |
| 3. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.  |
| 4. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.   |

### Addition and Subtraction

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| 5. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).      |
| 6. Add and subtract numbers mentally with increasingly large numbers. Use rounding to check answers to calculations and levels of accuracy. |
| 7. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.                    |

### Multiplication and division

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| 8. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.   |
| 9. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19.                |
| 10. Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method. Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division. |
| 11. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.   |
| 12. Recognise and use square numbers and cube numbers, and the notation for squared and cubed.  |

### Fractions

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| 13. Compare and order fractions whose denominators are all multiples of the same number. Add and subtract fractions with the same denominator and multiples of the same number.   |
| 14. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.   |
| 15. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $> 1$ as a mixed number.  |
| 16. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.  |
| 17. Round decimals with two decimal places to the nearest whole number and to one decimal place. Read and write decimal numbers as fractions (e.g. $0.72 = \frac{72}{100}$ ).   |
| 18. Read, write, order and compare numbers with up to three decimal places. Solve problems involving number up to three decimal places.   |
| 19. Write percentages as a fraction. Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , $\frac{3}{5}$ and those with a denominator of a multiple of 10 or 25. |

## Measure

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| 20. Convert between different units of metric measure (e.g. km & m; cm & m; cm & mm; g & kg; l & ml). Use approx. equivalences between metric and imperial units (e.g. inches, pounds & pints). |
| 21. Measure & calc' the perimeter of composite rectilinear shapes in cm/m. Calc' area of squares/rectangles using standard units, square cm/m and est' the area of irregular shapes.            |
| 22. Estimate volume (e.g. using 1 cm blocks to build cubes/cuboids) and capacity (e.g. using water).  |
| 23. Solve probs involving converting between units of time. Use all 4 operations to solve probs involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.  |

## Geometry

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| 24. Identify 3D shapes, including cubes and other cuboids, from 2D representations.  |
| 25. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees.   |
| 26. Identify: angles at a point and one whole turn (total $360^\circ$ ); angles at a point on a straight line and $\frac{1}{2}$ a turn (total $180^\circ$ ); other multiples of $90^\circ$ . |
| 27. Use the properties of rectangles to deduce related facts and find missing lengths and angles.  |
| 28. Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.                 |

## Statistics

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| 29. Solve comparison, sum and difference problems using information presented in a line graph. |
| 30. Complete, read and interpret information in tables, including timetables.                  |