**National Curriculum Maths Targets:**

**Year 1**

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| Place Value | 1. 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. |
| 2. Count in multiples of twos, fives and tens. |
| 3. Given a number, identify one more and one less. |
| 4. Identify and represent numbers using objects and pictorial representations inc the number line, and use the language of: equal to, more than, less than (fewer), most, least. |
| 5. Read and write numbers from 1 to 20 in numerals and words. |

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| Add and Sub | 6. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. |
| 7. Represent and use number bonds and related subtraction facts within 20. |
| 8. Add and subtract one-digit and two-digit numbers to 20, including zero. |
| 9. Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = - 9. |

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| M | 10. Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial reps and arrays with the support of the teacher. |
| Fract | 11. Recognise, find and name a half as one of two equal parts of an object, shape or quantity. |
| 12. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. |

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| MEASURE | 13. Compare, describe & solve pract probs for: lengths/heights (short/tall, half/ double ); mass/weight (heavier/lighter); cap/vol (full/empty, more/less); time (quicker/slower/later) |
| 14. Measure and begin to record the following: lengths/heights; mass/weight; capacity/volume; time (hours, minutes, seconds). |
| 15. Recognise and know the value of different denominations of coins and notes. |
| 16. Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. |
| 17. Recognise and use language relating to dates, including days of the week, weeks, months and years. |
| 18. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. |
| GEOM | 19. Recognise and name common 2-D shapes (e.g. rectangles, circles and triangles) and 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres). |
| 20. Describe position, directions and movements, including whole, half, quarter and three-quarter turns. |

**Year 2**

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| Place Value | 1. Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward. |
| 2. Recognise the place value of each digit in a two-digit number (tens, ones). |
| 3. Identify, represent and estimate numbers using different representations, inc. the number line. |
| 4. Compare and order numbers from 0 up to 100; use <, > and = signs. |
| 5. Read and write numbers to at least 100 in numerals and in words. |
| Add and Sub | 6. Solve problems with addition and subtraction: using concrete objects and pictorial representations; applying their increasing knowledge of mental and written methods. |
| 7. Recall and use add and subtract facts to 20 fluently, and derive and use related facts up to 100. |
| 8. Add and sub nos using concrete objects, pictorial representations, and mentally, including: a 2-digit no and 1s or 10s; two 2-digit numbers; adding three 1-digit numbers. |
| 9. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. |
| 10. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. |
| Mult and Div | 11. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. |
| 12. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. |
| 13. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. |
| 14. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. |
| Fract | 15. Recognise/find/name/write fractions ⅟₃, ⅟₄, 2/4, ᶟ∕₄of a length, shape, set of objects or quantity. |
| 16. Write simple fractions e.g. ⅟₂of 6 = 3 and recognise the equivalence of 2/4and ⅟₂. |
| MEASURE | 17. Choose/use appropriate stand units to estimate/measure length/height (m/cm); mass (kg/g); temp (°C); cap (litres/ml) to nearest unit, using rulers, scales, thermometers and measuring vessels. |
| 18. Compare and order lengths, mass, volume/capacity and record the results using >, < and = . |
| 19. Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. |
| 20. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. |
| 21. Compare and sequence intervals of time. Know the number of minutes in an hour and the number of hours in a day. |
| 22. Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. |
| GEOMETRY | 23. Identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line. |
| 24. Identify and describe the properties of 3D shapes, inc the no. of edges, vertices and faces. |
| 25. Identify 2D shapes on the surface of 3D shapes, e.g. circle on a cylinder; a triangle on a pyramid. |
| 26. Compare and sort common 2D and 3D shapes and everyday objects. |
| 27. Order and arrange combinations of mathematical objects in patterns and sequences. |
| 28. Use math vocab to describe position, direction & movement inc movement in a straight line and distinguishing rotation as a turn & in terms of right angles for ⅟₄, ⅟₂, & ᶟ∕₄ turns (clock/anti-clockwise). |
| STATS | 29. Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. |
| 30. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity; ask and answer questions about totalling and comparing categorical data. |

**Year 3**

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| Place Value | 1. Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number. |
| 2. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). |
| 3. Compare and order nos up to 1000. Read and write nos up to 1000 in numerals and in words. |
| 4. Identify, represent and estimate numbers using different representations. |
| 5. Solve number problems and practical problems involving these ideas. |
| Add and Sub | 6. Add and subtract numbers mentally, including: a 3-digit no and 1s, 10s, 100s. |
| 7. Add and sub numbers with up to 3 digits, using formal written methods of columnar add and sub. |
| 8. Estimate the answer to a calculation and use inverse operations to check answers. |
| 9. Solve probs, inc missing no probs, using number facts, place value, and more complex add/sub. |
| Mult and Div | 10. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. |
| 11. Write and calc math statements for x and ÷ using the tables they know, including 2-digit numbers times 1-digit numbers, using mental and formal written methods. |
| 12. Solve probs and missing number probs, involving x and ÷, including integer scaling probs and correspondence probs in which n objects are connected to m objects. |
| Fractions | 13. Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. |
| 14. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. |
| 15. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. |
| 16. Recognise and show, using diagrams, equivalent fractions with small denominators. |
| 17. Add and sub fractions with the same denominator within one whole (e.g. ⁵∕₇ + ⅟₇ = ⁶∕₇). |
| 18. Compare and order unit fractions, and fractions with the same denominators. |
| MEASURE | 19. Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). |
| 20. Measure the perimeter of simple 2-D shapes. |
| 21. Add and subtract amounts of money to give change, using both £ and p in practical contexts. |
| 22. Tell/write the time from an analogue clock, inc Roman numerals from I to XII, and 12-hr/24-hr clocks. |
| 23. Estimate and read time with increasing accuracy to nearest min; record/compare time in secs, mins, hrs. Use vocab such as o’clock, a.m./p.m., morning, afternoon, noon and midnight. |
| 24. Know the no of seconds in a minute and the number of days in each month, year and leap year. |
| GEOMETRY | 25. Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. |
| 26. Recognise that angles are a property of shape or a description of a turn. |
| 27. Identify right angles, recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 a complete turn. Identify whether angles are greater than or less than a right angle. |
| 28. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. |
| STATS | 29. Interpret and present data using bar charts, pictograms and tables. |
| 30. Solve one-step and two-step questions such as ‘How many more?’ and ‘How many fewer?’ using information presented in scaled bar charts and pictograms and tables. |

**Year 4**

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| Place Value | 1. Count in multiples of 6, 7, 9, 25 and 1000. |
| 2. Find 1000 more or less than a given number. Round any number to the nearest 10, 100 or 1000. |
| 3. Count backwards through zero to include negative numbers. |
| 4. Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000. |
| 5. 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. |
| Add and Sub | 6. Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. |
| 7. Estimate and use inverse operations to check answers to a calculation. |
| 8. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. |
| Mult and Divide | 9. Recall multiplication and division facts for multiplication tables up to 12 × 12. |
| 10. Recognise and use factor pairs and commutativity in mental calculations. |
| 11. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. |
| 12. Solve probs involving x and +, inc. using the distributive law to mult 2 digit nos by 1 digit, integer scaling probs and harder correspondence probs such as n objects are connected to m objects. |
| Fractions | 13. Recognise and show, using diagrams, families of common equivalent fractions. |
| 14. Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. |
| 15. Add and subtract fractions with the same denominator. |
| 16. Recognise and write decimal equivalents of any number of tenths or hundredths; and the decimal equivalents to ⅟₄, ⅟₂ and three quarters. |
| 17. Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. |
| 18. Round decimals with one decimal place to the nearest whole number. Solve simple measure and money problems involving fractions and decimals to 2 decimal places. |
| MEASURE | 19. Convert between different units of measure (e.g. kilometre to metre). Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days). |
| 20. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares. |
| 21. Estimate, compare and calculate different measures, including money in pounds and pence. |
| 22. Read, write and convert time between analogue and digital 12 and 24-hour clocks. |
| GEOMETRY | 23. Compare and classify geometric shapes, including quadrilaterals and triangles**,** based on their properties and sizes. |
| 24. Identify acute and obtuse angles and compare and order angles up to two right angles by size. |
| 25. Identify lines of symmetry in 2-D shapes presented in different orientations. |
| 26. Complete a simple symmetric figure with respect to a specific line of symmetry. |
| 27. Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down. |
| 28. Plot specified points and draw sides to complete a given polygon. |
| STATS | 29. Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. |
| 30. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. |

**Year 5**

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| Place Value | 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. |
| Add and Sub | 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. |
| Mult and Div | 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 | 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 = 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 ⅟₂, ⅟₄, ⅟₅, ⅖, ⅘ and those with a denominator of a multiple of 10 or 25. |
| MEASURE | 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 & calculate the perimeter of composite rectilinear shapes in cm/m. Calculate the area of squares/rectangles using standard units, square cm/m and estimate 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 four operations to solve probs involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. |
| GEOMETRY | 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 360⁰); angles at a point on a straight line and ½ a turn (total 180⁰); other multiples of 90⁰. |
| 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. |
| STATS | 29. Solve comparison, sum and difference problems using information presented in a line graph. |
| 30. Complete, read and interpret information in tables, including timetables. |

**Year 6**

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| P. V. | 1. 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. |
| 2. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above. |
| Add, Sub, Mult, Div | 3. Multiply and divide numbers up to 4 digits by a 2-digit whole number using the formal written methods and interpret remainders as whole number remainders, fractions, or by rounding. |
| 4. Identify common factors, common multiples and prime numbers. |
| 5. Use their knowledge of the order of operations to carry out calculations involving the four operations. |
| 6. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
| Fractions | 7. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. |
| 8. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. |
| 9. Multiply simple proper fractions and simplify the answer (e.g. ¼ x ⅟₂ = ⅟₈). Divide proper fractions by whole numbers (e.g. ⅓ ÷ 2 = ⅙). |
| 10. Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places. |
| 11. Multiply one-digit numbers with up to two decimal places by whole numbers. Use written division methods in cases where the answer has up to two decimal places. |
| 12. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
| R & P | 13. Solve problems involving the calculation of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison. |
| 14. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| ALGEBRA | 15. Express missing number problems algebraically. Use simple formulae expressed in words. |
| 16. Generate and describe linear number sequences. |
| 17. Find pairs of numbers that satisfy number sentences involving two unknowns. Enumerate all possibilities of combinations of two variables. |
| MEASURE | 18. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Convert between miles and km. |
| 19. Use, read, write & convert between standard units of measure, converting length, mass, volume & time from smaller to larger units, and vice versa, using decimal notation to up to 3 dec places. |
| 20. Recognise that shapes with the same areas can have different perimeters and vice versa. |
| 21. Calculate the area of parallelograms and triangles. Recognise when it is possible to use formulae for area and volume of shapes. |
| 22. Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm2) and cubic metres (m3), and extending to other units.  |
| GEOMETRY | 23. Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. |
| 24. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. |
| 25. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. |
| 26. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. |
| P & D | 27. Describe positions on the full coordinate grid (all four quadrants). |
| 28. Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
| STATS | 29. Interpret and construct pie charts and line graphs and use these to solve problems.  |
| 30. Calculate and interpret the mean as an average. |