**MATHEMATICS TARGETS - A YEAR 6 MATHEMATICIAN**

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| **Number, place value, approximation and estimation/rounding** |
| I can read, write, order and compare numbers up to10,000,000. |
| I can determine the value of each digit in numbers up to 10,000,000. |
| I can round any whole number to a required degree of accuracy. |
| I can use negative numbers in context, and calculate intervals across zero. |
| I can solve number problems and practical problems with the above. |
| **Calculations** |
| I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. |
| I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
| I can identify common factors, common multiples and prime numbers. |
| I can perform mental calculations, including with mixed operations and large numbers. |
| I can multiply multi-digit numbers up to 4 digits by a 2 digit whole number using the formal written method of long multiplication. |
| I can divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. |
| I can divide numbers up to 4 digits by a 2 digit number using the formal written method of short division where appropriate. |
| I can solve problems involving addition, subtraction, multiplication and division. |
| I can use my knowledge of the order of operations to carry out calculations involving the four operations. |

**MATHEMATICS TARGETS - A YEAR 6 MATHEMATICIAN**

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| **Fractions, decimals and percentages** |
| I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination. |
| I can compare and order fractions, including fractions >1. |
| I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. |
| I can multiply simple pairs of proper fractions, writing the answer in the simplest form. |
| I can divide proper fractions by whole numbers. |
| I can associate a fraction with division to calculate decimal fractions equivalents for a simple fraction. |
| I can identify the value of each digit to 3 decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places. |
| I can multiply 1-digit numbers with up to 2 decimal places by whole numbers. |
| I can use written division methods in cases where the answer has up to 2 decimal places. |
| I can solve problems which require answers to be rounded to specified degrees of accuracy. |
| I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |
| **Ratio and proportion** |
| I can solve problems involving the relative sizes of two quantities, where missing values can be found using integer multiplication and division facts. |
| I can solve problems involving the calculation of percentages and the use of percentage comparisons. |
| I can solve problems involving similar shapes where the scale factor is known or can be found. |
| I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| **Algebra** |
| I can express missing number problems algebraically. |
| I can use simple formulae. |
| I can generate and describe linear number sequences. |
| I can find pairs of numbers that satisfy an equation with two unknowns. |
| I can enumerate possibilities of combinations of two variables. |

**MATHEMATICS TARGETS - A YEAR 6 MATHEMATICIAN**

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| **Measurement** |
| I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation of up to 3 decimal places. |
| I can convert between miles and kilometres. |
| I recognise that shapes with the same areas can have different perimeters and vice versa. |
| I can calculate the area of parallelograms and triangles. |
| I recognise when it is possible to use the formulae for the area of shapes. |
| I can calculate, estimate and compare volume of cubes and cuboids, using standard units. |
| I recognise when it is possible to use the formulae for the volume of shapes. |
| I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate. |
| **Geometry – properties of shapes** |
| I can compare and classify geometric shapes based on the properties and sizes. |
| I can describe simple 3D shapes. |
| I can draw 2D shapes given dimensions and angles. |
| I recognise and build simple 3D shapes, including making nets. |
| I can find unknown angles in any triangles, quadrilaterals and regular polygons. |
| I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. |
| I can illustrate and name parts of circles, including radius, diameter and circumference. |
| I know the diameter is twice the radius. |
| **Geometry – position and direction** |
| I can draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes. |
| I can describe positions on the full co-ordinate grid (all four quadrants). |
| **Statistics** |
| I can interpret and construct pie charts and line graphs and use these to solve problems |
| I can calculate and interpret the mean as an average. |

**Mathematics Targets**

**Exceeding Year 6 Expectations**

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| I can compare, order and convert between fractions, decimals and percentages, for example, in contexts related to science, history or geography learning |
| I can move beyond squared and cubed numbers to calculate problems such as X x 10n where n is positive. |
| I can use =, ≠, <, >, ≤, ≥ correctly. |
| I can multiply all integers, (using efficient written methods) including mixed numbers and negative numbers. |
| I can recognise an arithmetic progression and find the n*th* term . |
| I can use a formula for measuring the area of a shape, such as a rectangle and triangle to work out the area of an irregular shape in the school environment |
| I can use the four operations with mass, length, time, money and other measures, including the use of decimal quantities. |
| I can create a scaled model of an historical or geographical structure showing an acceptable degree of accuracy using known measurements. |
| I can calculate the costs and time involved of a visit to a destination in another part of the world relating to on-going learning in history or geography. |
| I can collect my own data on a personal project and present information in formats of my choosing, using charts, graphs and tables, and answer specific questions related to my research. |