| Wk | Maths Aspect | Y5 Non-Negotiable | Y6 Non- Negotiable | Resources | Y5 NC obj | Y6 NC obj |
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| 1 | All four operations:  mental methods. | Addition and subtraction:  mental and written methods | Knows how to use mental calculations with increasingly large numbers and more complex calculations. |  | ●To add and subtract numbers mentally with increasingly large numbers  ● To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).  ● To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | ● To perform mental calculations, including with mixed operations and large numbers.  ● To solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why.  ● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. |
| 2 | All four operations:  written methods | Knows efficient methods for multiplication and division. | Knows addition, subtraction, multiplication and division for larger numbers, using the formal written methods of columnar addition and subtraction, short and long multiplication, and short and long division. |  | ● To multiply and divide numbers mentally drawing upon known facts.  ● To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.  ● To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context. | ● To solve problems involving addition, subtraction, multiplication and division.  ● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. ●  ● To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.  ● To solve problems involving numbers up to three decimal places. |
| 3 | Fractions:  calculating | Knows how to multiply proper fractions and mixed numbers using the rule of dividing by 1 to represent the whole number as a fraction. | Knows how to calculate with FDP with accuracy. |  | ● To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | ● To solve problems which require answers to be rounded to specified degrees of accuracy.  ● To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
| 4 | Geometry: properties of shape,  Y5 diagonals  Y6 including circles | Knows the term diagonal and can make conjectures about the angles formed between sides, and between diagonals and parallel sides, and other properties of quadrilaterals. | Knows how to describe the properties of shapes and explain how unknown angles and lengths can be derived from known measurements. |  | ● To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles  ● To draw given angles and measure them in degrees (º).  ● To identify: angles at a point and one whole turn (total 360º)  ● angles at a point on a straight line and 1/2 a turn (total 180º)  ● other multiples of 90º.  ● To use the properties of a rectangle to deduce related facts and find missing lengths and angles.  ● To distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | ● To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons  ● To illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
| 4 |  |  |  |  |  |  |
| 5 | Ratio and proportion:  solving problems |  | Knows ratios compares quantities.  Knows the notation *a:b* to record a ratio.  Knows how to use multiplication/division to find a scale factor.  Knows how to solve problems with ratio and proportion. |  |  | ● To solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts  ● To solve problems involving similar shapes where the scale factor is known or can be found.  ● To solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| 6 | Algebra:  finding unknowns and variables |  | Knows how to use the arithmetic relationships to find unknowns or variables. |  |  | ● To find pairs of numbers that satisfy number sentences involving two unknowns.  ● To enumerate all possibilities of combinations of two variables. |
| 7 | Statistics:  mean average |  | Knows the arithmetic for finding the mean average. |  |  | ● To calculate and interpret the mean as an average. |
| 8 | Statistics:  line graphs |  | Knows how to interpret and draw graphs relating two variables, arising from their own enquiry and in other subjects. |  |  | ● To interpret and construct pie charts and line graphs and use these to solve problems. |
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