Year 6 Primary NC in Mathematics Statutory requirements	Comment
NUMBER: Number and place value • 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 • use negative numbers in context, and calculate intervals across zero • solve number problems and practical problems that involve all of the above.	Y5 previously: 'Count from any given number in whole number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line' and 'explain what each digit represents in whole numbers'. Upper limit [i.e. at least 10,000,000] not previously specified. Moved up from Y5: 'Explain what each digit represent in whole numbers and partition, round and order these numbers'.
Addition, subtraction, multiplication and division • multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, & interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication and division • use estimation to check answers to calculations & determine, in the context of a problem, levels of accuracy.	Y6 previously: 'Use efficient written methods to multiply and divide integers and decimals by a 1 digit integer and to multiply 2 digit and 3 digit integers by a 2 digit integer'. No specific reference to 4 digit numbers or long multiplication or long division methods previously. Y6 progression to Y7 stated: 'Extend division to dividing 3 digit integers by 2 digit integers'. Moved down from Y6 progression to Y7: 'Use the order of operations, including brackets'.
Fractions (including decimals and percentages) • use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions >1 • add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. ¼ × ½ = 1/8) • divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6). • associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) • 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 • 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 • solve problems which require answers to be rounded to specified degrees of accuracy. • recall & use equivalences between simple fractions, decimals & percentages, including in different contexts.	Y6 previously just specified: 'order a set of fractions by converting them to fractions with a common denominator'. Previously a one digit number with one decimal place.
Ratio and proportion • solve problems involving the relative sizes of two quantities, where missing values can be found by using integer multiplication and division facts • solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison • 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 • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation involving two unknowns. • enumerate all possibilities of combinations of two variables.	Y6 previously stated: 'Represent and interpret sequences, patterns and relationships involving numbers and shapes; construct and use simple expressions and formulae in words then symbols'. Y6 progression to Y7 introduced the idea of using letters or symbols to represent unknown numbers or variables.
Measurement • solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • 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 to 3 decimal places • convert between miles and kilometres • recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use the formulae for area and volume of shapes • calculate the area of parallelograms and triangles • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units, such as mm^3 and km^3.	Convert between units using decimals to 2 places was Y6. Using 3 decimal places has been moved down from Y6 progression to Y7. Moved down from Y6 progression to Y7: 'measure and calculate using imperial units still in everyday use and know their approximate metric values'. Y6 progression to Y7 previously stated: 'calculate the area of right-angled triangles given the length of two perpendicular sides'. Parallelograms not previously mentioned specifically. Y6 progression to Y7 previously stated: 'Calculate the volume and surface area of cubes and cuboids'.
Geometry: properties of shapes • Draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	Moved up from Y5: 'use knowledge of properties to draw 2-D shapes'. Previously Y6: 'make and draw shapes with increasing accuracy and apply knowledge of their properties; estimate angles, and use a protractor to measure and draw them, on their own and in shapes'. Moved up from Y5: 'Identify and draw nets of 3-D shapes'. Y6 previously stated: 'Describe, identify and visualise parallel and perpendicular edges or faces; use these properties classify 2-D shapes and 3-D solids' and 'make and draw shapes with increasing accuracy and apply knowledge of their properties'. Moved down from Y6 progression to Y7: 'Know the sum of angles on a straight line, in a triangle and at a point, and recognise vertically opposite angles'.
Position and direction • describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Moved down from Y6 progression to Y7: 'Use all four quadrants to find coordinates of points determined by geometric information.
Statistics • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average.	Y6 previously: 'Construct and interpret line graphs; interpret pie charts.' The Y6 progression to Y7 stated: 'Construct, interpret and compare graphs and diagrams that represent data', which could extend to pie charts. It also gave the option of presenting and interpreting data 'using ICT as appropriate'. Y6 previously stated: 'Describe and interpret results and solutions to problems using the mode, range, median and mode'.