'Assessing Without Levels' ~ *Progress & Attainment Against Expectations*			
Mathematics Curriculum 2014: Year 6			
	Emerging	**Expected**	**Exceeding**
Numbers & the number system			
• 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 and practical problems that involve all of the above.			
Calculation ~ addition & subtraction multiplication & division			
• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal 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 and 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 whole 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 and determine, in the context of a problem, levels of accuracy.			
Algebra			
• Use simple formulae			
• Generate and describe linear number sequences			
• Express missing number problems algebraically			
• Find pairs of numbers that satisfy number sentences with two unknowns			
• Enumerate possibilities of combinations of two variables.			
Ratio & 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 (*for example, of measures, and 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.			

Calculations ~ Fractions, Decimals and Percentages			
• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.			
• Compare & order 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 [*for example* $^1/_4 \times {}^1/_2 = {}^1/_8$]			
• Divide proper fractions by whole numbers [*for example* $^1/_3 \div 2 = {}^1/_6$]			
• Associate a fraction with division and calculate decimal fraction equivalents [*for example 0.375*] for a simple fraction [*for example* $^3/_8$]			
• Identify the value of each digit to three decimal places & x and ÷ numbers by 10, 100 and 1000 - with answers to 3 decimal places			
• Multiply one-digit numbers with up to two decimal places by whole numbers			
• Use written ÷ methods where the answer has up to 2 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.			
Measures			
• 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 up to three 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 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 centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units [*for example* mm^3 *and* km^3 .]			
Shape and Space			
• Draw 2-D shapes using given dimensions and angles			
• Recognise, describe and build simple 3-D shapes, including making nets.			
• Compare & classify geometric shapes based on their properties & sizes & find unknown angles in any triangles, quadrilaterals &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.			
• 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			

Statistics			
• Interpret and construct pie charts and line graphs and use these to solve problems			
• Calculate and interpret the mean as an average.			