

Year 6		Step 20	Step 21
Problem Solving		<ul style="list-style-type: none"> - I can solve number problems and practical problems involving a range of ideas - I can solve number problems and practical problems involving negative numbers - I can solve problems which require the knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25. - I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. - I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. - I can use written division methods in cases where the answer has up to 2 decimal places solve problems which require answers to be rounded to specified degrees of accuracy. - I can use my knowledge of the order of operations to carry out calculations involving the 4 operations. - I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate. - I can solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts. - I can solve problems involving similar shapes where the scale factor is known or can be found. - I can solve problems involving the calculation of percentages (for example, of measures such as 15% of 360) and the use of percentages for comparison - I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. 	
Number	Place Value	<ul style="list-style-type: none"> - I can read, write, order and compare numbers up to 1,000,000 and determine the value of each digit - I can round any number up to 10 000 000 to the nearest 10 000, 100 000 and 1 000 000 - I can put negative numbers onto a number line I am beginning to solve solve sum and difference problems involving negative numbers using concrete resources. 	<ul style="list-style-type: none"> - I can read, write, order and compare numbers up to 10,000,000 and determine the value of each digit - I can choose to round any whole number up to the nearest 10, 100, 1000 and 10,000 depending on the required accuracy. - I can use negative numbers in context, and calculate intervals across 0. <p>I can solve solve sum and difference problems involving negative numbers using concrete resources.</p>
	Counting		
	Fractions and Decimals	<ul style="list-style-type: none"> - I can compare and order mixed numbers whose denominators are multiples of the same number - I can add and subtract fractions with the different denominators using the concept of equivalent fractions - I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams - I can multiply simple pairs of proper fractions. - I can divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. - I am beginning to divide proper fractions by whole numbers - I can read and write -decimal numbers as fractions and vice versa E.g. $\frac{73}{100} = 0.73$ - I can divide proper fractions by whole numbers using a visual representation I can use a numberline to compare fractions > 1. I am beginning to convert numbers < 1 to 2 d.p. to a proper fraction. (E.g. $0.26 = \frac{26}{100} = \frac{13}{50}$) - I can recall and use equivalences between simple fractions, decimals and percentages 	<ul style="list-style-type: none"> - 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 its simplest form. - I can identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. - I can divide proper fractions by whole numbers - I can associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction. - I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Calculating	Addition and Subtraction	<ul style="list-style-type: none"> - Add and subtract numbers mentally with increasingly large numbers. - I can use rounding to check answers to calculations and determine, in the context of a problem and levels of accuracy 	<ul style="list-style-type: none"> - Add and subtract numbers mentally with increasingly large numbers and mixed operations.. - I can use brackets and inverses effectively e.g. $(24+P) \times 6 = 150$. - I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
	Multiplication and Division	<ul style="list-style-type: none"> - I can multiply larger numbers ($< 10,000$) by single-digit numbers using short multiplication. - Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 1 and 0; dividing by 1; multiplying together three numbers. - I know multiples, factors, square numbers prime numbers 	<ul style="list-style-type: none"> - I can multiply numbers to 2 d.p. by a single-digit number using short multiplication. - I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. - I can use brackets and inverses effectively e.g. $(24+P) \times 6 = 150$

		<ul style="list-style-type: none"> - I can use brackets in simple calculations - I can use knowledge of times tables and place value to multiply TU.t by U e.g. $0.06 \times 4 = 0.24$. - I can divide 4-digit numbers by 2-digit numbers using the formal method with remainders I can multiply 4-digit numbers x 2 digit numbers using long multiplication. - I can divide ThHT1s by 1s where the remainder is recorded as a fraction. 	<ul style="list-style-type: none"> - I can 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.
Geometry	Properties of shape	<ul style="list-style-type: none"> - I can recognise, describe and build simple 3-D shapes, including making nets. - I can compare and classify geometric shapes, including any quadrilaterals, regular polygons and triangles, based on their properties and sizes - I know that the diameter is twice the radius. - I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (and right angles) I can use conventional markings for lines and angles in geometrical drawings and sketches. 	<ul style="list-style-type: none"> - I can make 3d shapes using modelling materials; recognise 3d shapes in different orientations and describe them. - I can find unknown angles in any triangles, quadrilaterals, and regular polygons by representing the relationship algebraically. - I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. I can express the relationship between radius and diameter as $d=2r$ or $2 \times r$ I can describe position using co-ordinates in all 4 quadrants on a 2D grid in the first quadrant after a reflection in either the horizontal or vertical axes.
	Position and direction	<ul style="list-style-type: none"> - I can describe movements between positions as translations of a given unit to the left/right and up/down - I can identify, describe and represent the position of a shape following a translation, 	<ul style="list-style-type: none"> - I can describe positions on a 2D grid as coordinates in the first quadrant - I can identify, describe and represent the position of a shape following a reflection or a translation, using the appropriate language, and know that the shape has not changed
Measurement		<ul style="list-style-type: none"> - I can use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places. - I can calculate volume of cubes and cuboids using standard units, - I can calculate the area of parallelograms 	<ul style="list-style-type: none"> - I can use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places. - I can recognise when it is possible to use formulae for area and volume of shapes - I can relate the area of rectangles to triangles and parallelograms and calculate their areas, understanding and using formula - I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres (and extending to other units (for example, mm^3 and km^3).
Statistics		<ul style="list-style-type: none"> - I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts line graphs and pie charts - I can calculate the mean 	<ul style="list-style-type: none"> - I can complete, read and interpret information in tables, including time tables I can convert discrete data to % and then convert to degrees to construct a pie chart for common % (E.g. 75%, 50%, 25%, 20%, 10%, 5%) - I can calculate and interpret the mean as an average
Algebra		<ul style="list-style-type: none"> - I can use simple formulae to calculate answers - I can use inverses in number problems (e.g. I think of a number, double it and add five, the answer is 35. What is the original number) I can find pairs of numbers that satisfy an equation with 2 unknowns (E.g. $a + b = 20$) I can predict the nth term in a linear sequence. I can write equivalent expressions in algebraic form. 	<ul style="list-style-type: none"> - I can use symbols and letters to represent an unknown number. - I can recognise negative numbers and continue positive negative number sequences and find missing numbers - I can generate linear sequences to calculate solutions to a problem. I can express generalisations of a linear number sequence using algebraic expressions.
Ratio and Proportion		<ul style="list-style-type: none"> - I can understand simple ratio and can solve problems involving direct proportion by scaling up/down. - I can find percentages (e.g. 30%, 60%) of quantities (multiples of 10) . I can use ratio tables or double numberline to solve unknowns in simple ratio problems. I can represent a ratio as a:b and read this as for every 'a' there is a 'b'. 	<ul style="list-style-type: none"> - I can reduce a ratio to its simplest form and use it in problem solving by multiplying (e.g. given the ingredients in a recipe for 5 people, calculate the quantities needed for 8) - I can calculate simple fractions and percentages of quantities (e.g. $\frac{3}{8}$ of 980g, 15% of 360). I can partition % in to manageable units to calculate. (E.g. 15% of 360 is 10% of 360 + 5% of 360)