

Year Group Mathematics Objectives Jane Prelogauskas St Andrew's CE Primary School – August 2014

YEAR SIX	NUMBER & NUMBER FACTS/CALCULATIONS/PLACE VALUE/COUNTING	GEOMETRY/MEASURES MONEY	STATISTICS (Data Handling)	FRACTIONS DECIMALS PERCENTAGES RATIO	ALGEBRA
Working towards	<ul style="list-style-type: none"> ~ Use negative numbers in context, and calculate intervals across zero. ~ Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. ~ Perform mental calculations, including with large numbers. ~ Multiply multi-digit numbers up to 4 digits by a 2 digit whole number, using the formal written method of long multiplication. Divide numbers up to 4 digit 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, and as appropriate for the context. ~ 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. 	<ul style="list-style-type: none"> ~ Compare and classify geometric shapes based on their properties and sizes. ~ Find unknown angles in any triangles, equilaterals, and regular polygons. ~ Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate. ~ Use, read, write and convert between standard units, converting measurements of length, mass, volume and time for a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to 3 decimal places . ~ Recognise when it is possible to use formulae for area and volume of shapes. ~ Draw and translate simple shapes on the co-ordinate plane , and reflect them in the axes. 	<ul style="list-style-type: none"> ~ Interpret pie charts and line graphs . ~ Use pie charts and line graphs to solve problems. 	<ul style="list-style-type: none"> ~ Use common factors to simplify fractions. ~ Use common multiples to express fractions in the same denomination. ~ Solve problems which require answers to be rounded to specified degrees of accuracy, ~ Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. ~ Identify the value of each digit in numbers given to 3 decimal places. ~ Multiply and divide numbers by 10, 100 and 1000, giving answers up to 3 decimal places. 	<ul style="list-style-type: none"> ~ Use simple formulae ~ Express missing numbers algebraically.
Mainly Achieved	<ul style="list-style-type: none"> ~ Round any whole number to a required degree of accuracy. ~ Identify common factors, common multiples and prime numbers. ~ Perform mental calculations, including with mixed operations. Divide numbers up to four digits by a 2 digit number, using the formal written method of short division, where appropriate, interpreting remainders according to context. ~ Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. 	<ul style="list-style-type: none"> ~ Recognise, describe and build simple 3D shapes, including making nets ~ Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. ~ Solve problems involving similar shapes, where the scale factor is known or can be found. ~ Recognise angles where they meet at a point, are on a straight line, or are vertically opposite. ~ Find missing angles. ~ Convert between miles and kilometres. ~ Recognise that shapes with the 	<ul style="list-style-type: none"> ~ Calculate and interpret the mean as an average. ~ Construct line graphs. 	<ul style="list-style-type: none"> ~ Compare and order fractions, including fractions > 1 ~ Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. ~ Associate a fraction with division and calculate decimal fraction equivalence (eg. 0.375) for a simple fraction. ~ Multiply one digit number with up to two decimal places by whole numbers. ~ Solve problems involving the relevant sizes of two quantities, where missing values can be found by using integer 	<ul style="list-style-type: none"> ~ Generate and describe linear number sequences. ~ Find pairs of numbers that satisfy any equation with two unknowns.

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		<p>same area can have different perimeters and vice versa.</p> <ul style="list-style-type: none"> ~ Describe positions on the full co-ordinate grid (all four quadrants) ~ Reflect simple shapes in the axes of a full co-ordinate grid. 		<p>multiplication and division facts.</p> <ul style="list-style-type: none"> ~ Solve problems involving unequal sharing and grouping, using knowledge of fractions and multiples. 	
Achieved	~	<ul style="list-style-type: none"> ~ Draw 2D shapes using given dimensions and angles. ~ Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic cms (cm³) and cubic metres (m³), and extending to other units. <p>Calculate the area of parallelograms and triangles.</p>	Construct pie chart.	<ul style="list-style-type: none"> ~ Multiply simple pairs of proper fractions, writing the answer in its simplest form. ~ Divide proper fractions by whole numbers. ~ Multiply simple pairs of proper fractions. ~ Use written division methods in cases where the answer has up to two decimal places. ~ Solve problems involving the calculation of percentages (eg. of measures, and such as 15% of 360) and the use of percentages for comparison. 	Enumerate possibilities of combinations of two variables.