

John Fletcher of Madeley Primary School
 Medium term planning – New Curriculum 2014

Year 6

Spring Term

Mathematical aspect		Curriculum statement
U & A	Unit 1 Negative numbers, and solving problems involving numbers	<ul style="list-style-type: none"> ● To read, write, order and compare numbers at least to 10,000,000 and determine the value of each digit. ● To round any whole number to a required degree of accuracy. ● To use negative numbers in context, and calculate intervals across zero. ● To solve number problems and practical problems that involve all of the above.
U & A	Unit 2 Mental and written addition and subtraction of decimals and money	<ul style="list-style-type: none"> ● To perform mental calculations, including with mixed operations and large numbers. ● To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. ● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
U & A	Unit 3 Mental and written multiplication and division	<ul style="list-style-type: none"> ● To perform mental calculations, including with mixed operation and large numbers. ● To identify common factors, common multiples and prime numbers (Children could practise using mental methods that involve using factors, for example.) ● To use their knowledge of the order of operations to carry out calculations involving the four operations. ● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
U & A	Unit 4 Calculating with fractions	<ul style="list-style-type: none"> ● To add and subtract fractions with different denominators, using the concept of equivalent fractions. ● To associate a fraction with division to calculate decimal fraction equivalents (0.375) for a simple fraction (3/8). ● To multiply simple pairs of proper fractions, writing the answer in its simplest form ($1/4 \div 1/2 = 1/8$). ● To divide proper fractions by whole numbers ($1/3 \div 2 = 1/6$).
U & A	Unit 5 Geometry: Reflections and translations on coordinate axes	<ul style="list-style-type: none"> ● To describe positions on the full co-ordinate grid (all four quadrants). ● To draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes.
U & A	Unit 6 Measurement: Perimeter, area and volume	<ul style="list-style-type: none"> ● To recognise that shapes with the same area can have different perimeters and vice versa. ● To calculate the area of parallelograms and triangles. ● To recognise when it is possible to use the formulae for area and volume of shapes. ● To 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 such as mm^3 and km^3.

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U & A	Unit 7	Calculating with large numbers	<ul style="list-style-type: none"> ● To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. ● To 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. ● To 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. ● To perform mental calculations, including with mixed operations and large numbers. ● To use their knowledge of the order of operations to carry out calculations involving the four operations. ● To solve problems involving addition, subtraction, multiplication and division.
U & A	Unit 8	Multiplying and dividing decimals	<ul style="list-style-type: none"> ● To multiply one-digit numbers with up to two decimal places by whole numbers. ● To use written division methods in cases where the answer has up to two decimal places. ● To solve problems which require answers to be rounded to specified degrees of accuracy.
U & A	Unit 9	Percentages, decimals and fractions Ratio & Proportion	<ul style="list-style-type: none"> ● To solve problems involving the calculation of percentages of whole numbers or measures and the use of percentages for comparison. ● To recall and use equivalences between simple fractions, decimals and percentages, including different contexts. ● 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.
U & A	Unit 10	Algebra: number puzzles	<ul style="list-style-type: none"> ● To express missing number problems algebraically. ● To use simple formulae expressed in words. ● To generate and describe linear number sequences. ● To find pairs of numbers that satisfy number sentences involving two unknowns. ● To enumerate all possibilities of combinations of two variables.
U & A	Unit 11	Measurement: Area and volume	<ul style="list-style-type: none"> ● To solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places, where appropriate. ● To 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 three decimal places. ● To calculate the area of parallelograms and triangles. ● To recognise when it is possible to use the formulae for area and volume of shapes.

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U & A	Unit 12	Statistics: Line graphs	●To interpret and construct line graphs and use these to solve problems.
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