Year 6 Maths Medium Term Planning

Autumn 1		Autumn 2	
Number and Place Value (3 weeks)	**Four operations (4 weeks)**	**Fractions (4 weeks)**	**Decimals & percentages (3 weeks)**
• 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	• 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 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	• 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 • divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] • associate a fraction with division and calculate decimal fraction equivalents • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	• identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers 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 and use equivalences between simple fractions, decimals and percentages, including in different contexts

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	• 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.			
Vocabulary: Ten million Millions Thousands Tens Ones zero Place Value Greater Than Less Than Rounded Partition	**Vocabulary:** Add Total Make Sum Plus Altogether Difference Subtract Less Minus Take away Column addition Column subtraction Inverse Multiplication Division Formal methods Divide Multiply Operations Factors Multiples	**Vocabulary:** Numerator Denominator Proper fraction Improper fraction Mixed number Factor Highest common multiple Lowest common multiple Common denominator Common numerator	**Vocabulary:** Decimals Percentages Decimal Fraction Decimal Place Sharing Partitioning Tenths Hundredths Thousandth Grouping Exchanging Sharing % Per cent = out of 100 Percentage Discount Equivalent fraction Equivalent Decimal Convert Compare Order	
Spring 1		**Spring 2**		
(Week 1: Consolidation of Fractions, decimals and percentages) **Ratio** **(2 weeks)**	**Number - Algebra** **(2 weeks)**	**Measurement** **Converting units** **(1 week)**	**Measurement** **Perimeter** **Area & Volume** **(2 weeks)**	**Geometry- Properties of shape** **(3 weeks)**
• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	• use simple formulae expressed in words • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation	• solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places	• recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is	• draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets

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• solve problems involving the calculation of percentages [for example, of 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	with two unknowns • enumerate possibilities of combinations of two variables	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	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 cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].	• 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.
Vocabulary: Ratio Proportion Part Whole Scale Factor Enlargement Similar shapes Length Width	**Vocabulary:** Term to Term rule Variable Unknown Expression Equation Formula One step- equation 2 step equation Enumerate Substitution	**Vocabulary:** Mass Gram Kilogram Capacity Volume Millilitre Litre Millimetre Ounce Inch foot Gallon Mile Kilometre Stone Pint Pound	**Vocabulary:** Perimeter Area Volume Cubic unit Cuboid Width Length Height Rectilinear Parallelogram	**Vocabulary**: 2D Shape 3D Shape Corners Sides Vertices Edges Faces Net Angles Acute Obtuse Right angle Reflex Rotation Degrees Opposite Circumference Radius Diameter

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Summer 1			Summer 2	
Geometry- Position and direction (2 weeks)	**Statistics (2 weeks)**	**Consolid -ation (SATs)**	**Consolidation**	**Consolidation**
• describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane • reflect shapes using both the x and y-axis	• interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average.		Themed work Projects Revisit and revise.	Themed work Projects Revisit and revise
Vocabulary: Coordinate x-axis y-axis Quadrants Positive Negative Translate Reflect Symmetrical	**Vocabulary**: Bar chart Pictogram Frequency table Tally chart Pie chart Discrete data Continuous data Line graph Sum Difference Comparison Interpret Mean Average			

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