## Year 6 – Key Vocab:

| Essentials Sequence | Key concepts | Key vocabulary |
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| 6LS1 – Place Value | Apply existing understanding of place value up to 10,000,000 and to decimals with up to 3 decimal places | Place value, millions, hundred thousands, ten thousands, thousands, hundreds, tens, ones, digits, smallest, greatest, digit, part-whole model, part, whole, re-group, placeholder, equivalent, total, equality, value, more, less, 'powers of 10,' approximately, nearest, rounded, place, position, proportion,' less than,' 'more than,' size, boundary, round |
| 6LS2 - Multiply and Divide by 10, 100 and 1,000 | Multiplying and dividing up to 3 decimal places and extending the context of measure. | Multiplication, dividing, decimal, millions, hundred thousands, thousands, hundreds, tens, ones, tenths, sharing, groups, re-group, equally, place-holder, fraction, value, decimal, multiple, larger, smaller, left, right, 'zero as a placeholder,' 'lots of,' digits |
| 6LS3 - Choosing Effective Mental Calculation Strategies | Mental strategies involving all four operations including fractions. | Estimation, solve, multiply, divide, add, subtract, re-group, re-combine, approximately, |
| 6LS4 - Problem Solving with Four Operations | Pupils exposed to worded questions involving the four operations | Total, answer, equal, add, plus, subtract, minus, 'take away,' multiply, divide, part, whole, more, less, left, share, product, bar model |
| 6LS5 - Application of Factors, Multiples and Primes | Using knowledge of factors, multiples and primes in a range of contexts. | Multiples, factors, 'common factors,' product, division, same, different, 'prime number,' 'square number,' pairs, 'common multiples,' |
| 6LS6 – Simplifying fractions | Applying knowledge of factors and multiples in a range of contexts, including the context of fractions. | 'Common multiple,' improper fraction, mixed number, multiply, convert, simplify equivalent, smallest, largest, fractions, unit fractions, discrete, parts, whole, equal, groups, split, continuous, quantities, total, remaining, divide, bar model, value, denominator, numerator, multiples, 'greater than,' 'less than' |

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| 6LS7 - Comparing and Ordering Fractions | Focus is on changing fractions to a common denominator but also estimating and using their fraction sense to ensure that their ordering is reasonable. | Improper fraction, mixed number, multiply, convert, simplify equivalent, smallest, largest, fractions, unit fractions, discrete, parts, whole, equal, groups, split, continuous, quantities, total, remaining, divide, bar model, value, denominator, numerator, multiples, 'greater than,' 'less than' |
| 6LS8 – Adding and Subtracting fractions | Builds on the conceptual understanding of why the denominator does not change when adding or subtracting fractions. Focus is also on using common denominators to be able to add and subtract fractions. | Add, subtract, numerator, denominator, improper fraction, mixed number, multiplied, convert, simplify equivalent, smallest, largest, fractions, unit fractions, discrete, parts, whole, equal, groups, divide, split, convert |
| 6LS9- Fraction and Decimal Equivalents | Pupils will use a wider range of non-unit fractions and will secure their understanding of the relationship between division and fractions to secure confident interchanging between fractions and decimals and to derive unknown equivalents from known ones. | Equivalent, tenths, hundredths, thousandths, divide, equal, parts, whole, |
| 6LS10 – Fractions, Decimals and Percentages | Focuses on basic recall of fractions, decimals and percentage equivalents. | Equivalent, fractions, proportion, hundredths, tenths, percent, multiply, divide, whole, parts, half, quarter , double |
| 6LS11 – Calculating percentages | Using what pupils already know about percentages to calculate new percentages and to solve problems | Multiply, bar model, equivalent, fractions, proportion, hundredths, tenths, percent, multiply, divide, whole, parts, half, quarter , double |
| 6LS12 – Formal Written Method of Multiplication | Applying the formal written methods of multiplication to a variety of problems. | Multiplicand, multiplier, doubling, halving, associative law, distributive law, multiple, equal, arrays, times tables, re-grouped, carried, multiply, divide, odd, even, groups, thousands, hundreds, tens, hundredths, thousandths, ones, product, carried, 'place holder,' 'place value' smaller, bigger |

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| 6LS13 – Area of Triangles and Parallelograms | Re-capping Length x Width for calculating the area of rectangles and introducing the language of Base x Height for calculating the area of triangles and parallelograms | Base, height, width, length, multiply, times, right-angle, isosceles, scalene, equilateral, triangle, rectangle, parallelogram, composite, rectilinear, half, hypotenuse, divide, horizontal, perpendicular |
| 6LS14 – Formal Written Method for Short Division | Pupils rehearse short division by one-digit numbers where answers have up to two decimal places. | Division, halving, sharing, re-grouping, remainder, arrays, groups, quotient, equal, multiples, thousands, hundreds, tens, ones, place value, equally, same, different, part-whole model, altogether, shared, placeholder, tenths, hundredths, estimate, divisible |
| 6LS15- Properties of Shape | Revisits previous learning and make further links between 2-D and 3-D shapes through recognising, describing and building simple 3-D shapes from nets. | Properties, vertices, vertex, faces, congruent, polygons, polyhedra, spheres, regular, irregular, angles, right angles, sides, 2D, internal, isosceles, scalene, equilateral, triangle, quadrilateral, circle, pentagon, hexagon, rectangle, octagon, equal, length, shape, cube, cuboids, cylinder, prisms, pyramids, parallelogram, trapezium, rhombus, edges, height, width, dimensions, diagonal, parallel, perpendicular, opposite, adjacent, reflex, acute, obtuse, reflex, circumference, diameter, radius, symmetry, net, |
| 6LS16- Order of Operations and Algebra | To solve problems using all four operations and supports the understanding of the reasons for the order of operations. BIDMAS is introduced. | Brackets, indices, powers, square root, multiply, divide, add, subtract, algebra, algebraically, value, total, variable, worth, equation, balanced, expressed |
| 6LS17 – Formal Written Method for Long Division | Short division with 2-digit numbers and long division will also be introduced. | Division, halving, sharing, re-grouping, remainder, arrays, groups, quotient, equal, multiples, thousands, hundreds, tens, ones, place value, equally, same, different, part-whole model, altogether, shared, placeholder, tenths, hundredths, estimate, divisible, subtraction |

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| 6LS18 - Exploring Relationships Between Perimeter and Area | Revise finding perimeter in a variety of contexts and explore its relationship to area. | Rectilinear, triangle, parallelograms, standard, irregular, units, multiply, rectilinear, area, length, width, total, perimeter, inverse, base, height, half, isosceles, scalene, equilateral, divide, algebraically, sum |
| 6LS19 – Recognise and Find Angles | Builds upon children's understanding of reflex, obtuse, acute and right angles. Also, builds on the understanding of algebra and consider how relationships might be expressed algebraically. | Multiples, total, obtuse, acute, reflect, angle, degrees, right angle, turn, protractor, measure, point, largest, smallest, horizontal, 90 degrees, 180 degrees, size, scale, direction, more, less, total, estimate, equal, quadrilaterals, triangles, full turn, value, interior, exterior, intersect, vertically, opposite, adjacent, subtract |
| 6LS20 - Reflection and Translation | Builds on pupils' understanding of coordinates, quadrants, axes and includes negative numbers. | Positions, translation, right, left, up, down, axes, x-axis, y-axis, whole numbers, integers, co-ordinates, movements, 2-dimensional, vertices, vertex, units, reflect, rotate, symmetry, values, quadrant, polygons, properties, quadrilateral, scalene, equivalent, isosceles, triangle, obtuse, acute, plot, mirror line, horizontal, vertical, flipped, congruent, origin |
| 6LS21 – Multiplying Fractions | Develops an understanding of the effect of multiplying a fraction by another fraction and have the opportunity to rehearse this in a variety of contexts. | Mixed fractions, improper fractions, unit fractions, discrete, parts, whole, equal, groups, split, continuous, quantities, total, remaining, divided, bar model, value, denominator, numerator, subtracted, addition, answer, smallest, largest, multiply, divide, multiplier, divisor, commutative, product, simplify |
| 6LS22 – Dividing Proper Fractions by Whole Numbers | Division of unitary fractions (fractions whose numerator is one) are initially considered and this is developed towards understanding of non-unitary fractions divided by whole numbers. | Division, mixed fractions, improper fractions, unit fractions, discrete, parts, whole, equal, groups, split, continuous, quantities, total, remaining, bar model, value, denominator, numerator, subtracted, addition, answer, smallest, largest, |

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| | | multiply, divide, multiplier, divisor, commutative, product, simplify, unitary, non-unitary |
| 6LS23 – Fraction Problem Solving | Consolidate knowledge of adding, multiplying, diving and subtracting fractions with a focus on problem solving. | Fractions, equal, part, whole, numerator, denominator, groups, share, divide, smaller, bigger, split, multiply, add, total |
| 6LS24 – Ratio and Proportion | Understanding of ratio and proportion is developed firstly by linking together equivalent fractions and simplification of ratio. | Whole, parts, simply, fraction, ratio, proportion, fraction |
| 6LS25 - Volume | Pupils will build on their understanding of cube numbers | Measure, capacity, volume, millilitres, litres, scale, units, equal, multiplication, product, group, metres cubed, cubic, 3-dimensional, cube, area, cuboid, face, calculate, width, height, length, square, equivalent |
| 6LS26 - Measures | Knowledge of measure is applied to one step and more worded problems. | Length, metres, centimetres, millimetres, unit, equal, mass, kilograms, grams, capacity, litres, millilitres, hours, minutes, seconds, pounds, inches, pints, feet, foot, mile, yard, inch, multiply, divide, fractions, decimals, convert, weeks, days, fewer, smaller, larger, greater, weight, Newtons, decade, century, month, metric, imperial, 'powers of 10,' equivalent, thousandth, hundredth, tenth, scale, |
| 6LS27 - Statistics – Interpret Line Graphs and Pie Charts | Builds upon the understanding of discrete data: collected by counting separate items or events and continuous data. | Sum, difference, line, graph, scale, axes, x-axis, y-axis, data, pie charts, discrete, continuous, conversion, equal, degrees, represent, percentage, spit, answer, relationship |
| 6LS28 – Algebra and Sequences | Builds upon pupil's understanding of algebra and how to identify missing terms in a sequence, including when the start and end number are given. | Algebra, algebraic, variables, linear, equation, unknown |
| 6LS29 – Calculate and Interpret Mean Average | Develop the understanding of mean as average. | Mean, average, total, divide, groups, add, |

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| 6LS30 – Application of Previous Year's Learning | Re-caps previous learning including Roman numerals, 2D shapes and drawing angles. | 2-dimensional, Roman, numerals, angles, protractor, time, degrees, polygons, shapes |
| 6LS31 – Application of Known Facts and Calculation Strategies | The focus is on rehearsal and application, with an emphasis on estimation. | Estimate, error, answer, reasonable, arithmetic, divide, share, group, multiply, times, add, plus, 'take away,' minus, subtract, equal, calculate |
| 6LS32 – Constructing Pie Charts | The construction of pie charts using a compass. | Data, discrete, percentage, proportion, Pie chart, compass, segments, divide, degrees, multiply, radius, vertical, horizontal, edge, protractor, nearest, whole |
| 6LS33 – Statistical Representations | Focus on exploring the strategies of misleading data. | Fair, misleading, distort, information, mislead, sample size, total, manipulate, graph, |
| 6LS34 – Further Algebra | Growing patterns are used to deepen understanding of the link between sequences and algebraic formula. | Algebraic, formulae, sequence, total, groups, sequence, term, formula, |
| 6LS35 – Financial Maths and Enterprise | Pupils are introduced to financial terms including income, expenses and budgets. | Plan, market, project, research, pitch, business plan, evaluation, reflection, budget, finance, cost, profit, loss, product |
| 6LS36 –Maths Preparation for KS3 | The purpose of this sequence is to reflect upon mathematical learning across KS2 and to support effective transition into KS3 through identifying key features of pupils as mathematicians. | Mathematician, calculation, strategy, choice, solve |