

### Year 4 – Key Vocab:

<b>Essentials Sequence</b>	<b>Key concepts</b>	<b>Key vocabulary</b>
4LS1 - Place Value – Order and Compare Numbers Beyond 1000	Place value including the importance of zero being a place holder.	Place value, thousands, hundreds, tens, ones, digits, smallest, greatest, digits, part-whole model, part, whole, re-group, placeholder, equivalent, total, equality, value, more, less
4LS2 - Rounding, Estimation and Magnitude	To visualise the magnitude of numbers relative to each other	Place value, rounded, thousands, hundreds, tens, ones, 'greater than,' 'less than,' approximately, equal, nearest, estimate, nearest, round, range, benchmark,
4LS3 - Securing Addition and Subtraction Mental Fluency	To practise both mental methods and columnar addition and subtraction with increasingly large numbers	Thousands, hundreds, tens ones, sum, 'think 10,' 'think 100,' 'think 1000,' re-group, commutativity, total, complements, compensation, subtraction, take away, equal, place value, difference, re-group, minuend, less than, fewer than, minus, add, estimate, complements, doubles, count on, round, nearest, approximate, equal difference, rebalance,
4LS4 - Securing Formal Written Addition and Subtraction Fluency	Place value understanding for addition and subtraction, and re-grouping (exchanging)	Thousands, hundreds, tens, ones, place value, regroup, exchange, calculation, sum, same, different, addition, subtraction, method, total, formal, more than, less than, minuend, decomposition, estimate, nearest,
4LS5 - Counting in Multiples of 6, 7, 9, 25 and 1000	Linked to repeated addition and multiplication facts	Arrays, repeated addition, times, times table, multiple, addition, count, multiplication, groups, total, equal, altogether, negative, thousands, hundreds, tens, ones
4LS6 - Multiplication and Division Facts (Times Tables)	Builds on multiplication facts and links to associative, distributive and commutative laws.	Divide, arrays, sharing, groups, multiplication, quotient, equal, multiples, 'fact families,' repeated addition, counting, divisibility, remainders, divisible, distributive law, associative law, commutative law, partitioned, sum, digital root

4LS7 - Factor Pairs, Integer Scaling and Correspondence Problems	Relating language of factors to understanding of multiplication. Bar models and arrays are models that are utilised in this sequence of learning.	Factors, multiplication, bar models, arrays, group, greater, larger, smaller, value, total, divide, difference, more, fewer
4LS8 - Problem Solving Including Measures to Apply Place Value, Mental Strategies and Arithmetic Laws	The bar model is used as a way to decode worded problems.	Addition, subtractions, multiplication, division, bar model, mass, grams, capacity, millilitres, litres, start, change, result, length, group, total, product, equal,
4LS9- Multiply and Divide a One or Two-digit Number by 10 and 100	Combining an understanding of place value, decimal notation (tenths and hundredths) and multiplication and division facts for the 10 times table. To deepen an understanding of what happens when numbers are multiplied and divided by 10 or 100.	Multiplication, dividing, decimal, thousands, hundreds, tens, ones, tenths, sharing, groups, re-group, equally, place-holder, fraction, value, larger, smaller, left, right, 'zero as a placeholder,' digits
4LS10 - Measure – Conversion of Units	Explores other conversions of measure related to time and money	Length, metres, centimetres, millimetres, unit, equal, mass, kilograms, grams, capacity, litres, millilitres, hours, minutes, seconds, nanoseconds, multiply, divide, fractions, decimals, convert, weeks, days, fewer, smaller, larger, greater, weight, Newtons, decade, century, month,
4LS11 - Measures – Compare, Estimate and Calculate	Understanding of measures through estimation and comparison as well as calculating with them. Draws on knowledge of measures and measuring in order to estimate and compare different amounts.	Approximately, scale, width, longer, shorter, unit, estimates, grams, mass, litre, millilitre, capacity, kilogram, grams, mass, length, centimetres, metres, millimetres, hours, minutes
4LS12 - Discrete and Continuous Data (Time Graphs), Including Application of Scales and Division	Understanding why some data is represented in bar charts and some in line graphs and exploring 'discrete' and 'continuous.'	Discrete, continuous, pictograms, interval, scale, value, interpret, tally, graph, data
4LS13 -Perimeter	Calculating simple perimeter using repeated addition and multiplication.	Length, width, perimeter, shape, rectangle, side, add, double, centimetres, metres, count, rectilinear

		, sum, altogether, total, distance, parallel, polygons, opposite, value
4LS14 - Properties of Shape	To develop classification of quadrilaterals, types of lines (number of parallel/perpendicular lines) and size of internal angles	Quadrilaterals, parallel, perpendicular, right angle, length, equal, sides, polygon, rectangle, square, circle, triangle, number of sides, line of symmetry, straight side, curved side, , greater than right angle, less than right angle, regular, irregular, congruent, rhombus, trapezium, parallelograms
4LS15-Symmetry	Builds upon lines of symmetry	2-dimensional, 3-dimensional, symmetrical, regular, irregular, polygons, quadrilateral, trapezium, sides, corners, concave, rhombus, kite, even, odd, vertex, parallel, face
4LS16-Decimal numbers	Place value and the base-10 number system	Place value, thousands, hundreds, tens, ones, tenths, hundredths, round, nearest, decimal, 'greater than', 'less than,' multiply, divide, whole, parts, equal, re-group, 'closer to,' 'nearest whole,' digits, approximately, equivalence, groups, smaller, bigger
4LS17 - Calculating With Decimals	Place value, re-grouping and adding and subtracting using the formal method	Re-grouping, addition, subtraction, complements, exchanging, thousands, hundreds, tens, ones, tenths, hundredths, place value, decimals, rename, sum, decomposition, same, different
4LS18 - Measure – Money	Builds upon decimal numbers and mental addition and subtraction	Pounds, pence, addition, subtraction, decimals, place value, tenths hundredths
4LS19 - Problem Solving involving Decimals to Two Decimal Places	Building on worded problems involving decimals.	Place value, thousands, hundreds, tens, ones, tenths, hundredths, round, nearest, decimal, 'greater than', 'less than,' multiply, divide, whole, equal, re-group, 'closer to,' 'nearest whole,' digits, approximately, equivalence, groups, smaller, bigger, pence, pound

4LS20 - Add and Subtract Fractions with the Same Denominator	Building on from fractions and the relationship between parts and the whole.	Whole, parts, re-grouping, complements, equal, add, subtract, numerator, denominator, value, groups, unknown, divide, split
4LS21 - Finding Fractions of Quantities	To understand the relationship between non-unit fractions, multiplication and division of quantities including decimal tenths and hundredths.	Quantities, whole, equal parts, multiply, divide, smaller, larger, quantities, equal groups, representations, bar model, divide,
4LS22 - Fractions in the context of measure	To apply knowledge of measures to order and compare measures when expressed as mixed units in the form of whole numbers, decimals and fractions.	Litres, millilitres, capacity, mass, grams, kilograms, length, centimetres, millimetres, metres, ascending, descending, tenths, hundredths, decimal, place value, equal, volume, longest, shortest, lightest, heaviest
4LS23 - Equivalent Fractions, Ordering and Comparing	Using benchmarks of familiar fractions and reasoning skills about the magnitude of the fractions, to order and compare them.	Equivalent, smallest, largest, fractions, unit fractions, discrete, parts, whole, equal, groups, split, continuous, quantities, total, remaining, divided, bar model, value, denominator, numerator, subtracted, addition, answer, benchmark, smallest, largest, multiply, divide, multiplier, divisor
4LS24 - Multiply Two and Three-digit Numbers by a One-digit Number Using a Formal Written Layout	Linking times table base facts and multiplying multiples of ten and one hundred in readiness for the formal method.	Doubling, halving, associative law, distributive law, multiple, equal, arrays, times tables, re-grouping, multiply, divide, odd, even, groups, thousands, hundreds, tens, ones, product, 'greater than,' 'less than,' base-10,
4LS25 - Divide Two and Three-digit Numbers by a One-digit Number Using a Formal Written Layout	Formal written division	Division, halving, sharing, re-grouping, remainder, arrays, groups, quotient, equal, multiples, thousands, hundreds, tens, ones, place value, equally, same, different, part-whole model, altogether
4LS26 - Time – Read, Write Calculate and Convert Time on Analogue and Digital 12- and 24-Hour Clocks	Understanding of 60 as a unit and rehearsed finding complements and intervals within 60. Telling the	24-hour clock, hour, minutes, seconds, days, clock face, hand, midday, midnight, o'clock, longer, after, before, quicker, quarter, half, three-quarters, past,

	time to the nearest minute, intervals of time with hours and minutes and durations of time.	to, clockwise, anti-clockwise, analogue, digital, Roman numerals, am, pm, later, earlier
4LS27 - Statistics – Interpret and Present Continuous and Discrete Data, Solve Problems incorporating Measures	Understanding variables, increase and decrease and interrogating the information presented.	Bar charts, intervals, data, same, different, scale, value, discrete, continuous, relationship, maximum, minimum, constant, variables, increase, decrease, line graphs, bar graphs, axes, x-axis, y-axis, time, distance,
4LS28 - Roman Numerals to 100 and Zero	Roman numerals from 0-100	Roman, numerals, clock, value, palindromic, minutes seconds, hours, half past, quarter past, quarter to
4LS29 - Negative Numbers – Counting through Zero and Calculating in Context	Understanding the place of negative numbers in the number system.	Positive, negative, number line, zero, smallest, largest, minus, difference, highest, lowest, count, forwards, backwards
4LS30 - Geometry – Angles	Re-capping that an angle is a measure of a turn rather than a measure of the space between two lines. Re-capping right angles so they can be used as a benchmark.	Angles, right angles, 'greater than,' 'smaller than,' acute, obtuse, regular, irregular, larger, smaller, 2-dimensional, 3-dimensional, benchmark, geometric, perpendicular, parallel, lines, sides, orientation, internal angle, polygons
4LS31 - Geometry – Properties of Triangles	Linked to properties of 2D shapes. Classifying a triangle as an isosceles, equilateral or scalene triangle.	Classifying, triangles, equilateral, scalene, isosceles, properties, length, sides, equal, angle, right angle, perpendicular, similarities, different, shorter, same, longer
4LS32 - Geometry – Coordinates in the First Quadrant and Translations	Focus is on the first quadrant in which both of the x-axis and y-axis values are all positive whole numbers (integers).	Positions, translation, right, left, up, down, axes, x-axis, y-axis, whole numbers, integers, co-ordinates, movements, 2-dimensional, vertices, vertex, units, reflected, rotated, symmetry, values, quadrant, plot
4LS33 - Geometry – Position and Direction, incorporating Angles and Plotting Points of a Shape	Understanding of coordinates to complete given polygons	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
4LS34 - Multiplication and Division Review	Understanding short and long division and short multiplication.	Multiply, divide, remainder, arrays, times-tables, equal, prove, base-fact, divisible, even, odd, partition, 'greater than', 'smaller than', product, powers of ten, double, halve, quotient, sharing, group
4LS35 – Area	Linking multiplication facts to calculate area	Rectilinear, multiplication, space, perpendicular, right-angles, centimetres, metres, squared, perimeter, shapes, length, side, width, base-facts
4LS36 – Fractions Review	Reviews the use of flexible regrouping to support the addition and subtraction of fractions. Understanding to calculate the quantities of fractions.	Total, simplest, equivalent, smallest, largest, fractions, unit fractions, discrete, parts, whole, equal, groups, split, continuous, quantities, total, remaining, divided, bar model, value, denominator, numerator, subtracted, addition, answer, benchmark, smallest, largest, multiply, divide, multiplier, divisor
4LS37 - Application and Problem Solving – Developing Operation Sense	Reviews problem solving and knowledge, developing pattern-spotting skills and noticing relationships between numbers.	Sequence, rule, pattern, relationship, predict, palindromic, sum, result, answer