Year 5 Maths Overview

The principles of Fluency, Problem Solving and Reasoning will be threaded throughout each unit.

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Autumn	**Place Value** Previous – Roman numerals to 100; read, write and order 4-digit numbers; Round to 10, 100 and 1000, Count in 1000s and 25s; negative numbers. • Read and write numbers to 10,000 • Recap adding and subtracting 10, 100 and 1000 • Read and write Roman Numerals to 1000 • Round to 10, 100 and 1000 up to 10,000 • Read, write and understand numbers to 100,000 • Compare and order numbers to 100,000 • Round to the nearest 10, 100, 1000 and 10,000 with numbers to 100,000 • Read, write and understand numbers to 1,000,000 • Count forwards and backwards in powers of 10 to 1,000,000 • Compare and order numbers to 1,000,000 • Round numbers to the nearest 10, 100, 1000, 10,000 and 100,000 to 1 million. • Count forwards and backwards including negative numbers • Know the difference between positive and negative numbers • Simple addition and subtraction involving negative numbers (in terms of less and more)			**Addition and Subtraction** Previous – Adding and subtracting 4 digit numbers using expanded method; mentally adding and subtracting multiples of 10, 100 and 1000. • Add numbers up to 1,000,000 using compact column method • Subtract numbers up to 1,000,000 using compact column method • Use knowledge of rounding to estimate and approximate answers • Use inverse operations to check answers • Solve missing numbers and inverse problems, e.g I think of a number… • Solve multi-step problems using addition and subtraction		**Multiplication and Division** Previous – Children know all multiplication and division facts to 12x 12, can multiply 3 numbers, multiply and divide by 100, factor pairs and multiples, multiply and divide to 3-digits using formal methods • Understand multiples • Look for patterns to identify multiples • Find common multiples • Identify factors and factor pairs • Use patterns to identify factors. • Find common factors • Understand and identify prime numbers • Understand and identify square numbers • Introduce correct notation • Understand cube numbers • Identify correct notation • Multiply numbers by 10, 100 and 1000 • Divide numbers by 10, 100 and 1000 • Multiply and Divide with multiples of 10, 100 and 1000		**Statistics** Previous – tables, pictograms, bar charts and line graphs, range of scales, collecting and presenting information, answering problems by comparing data. 24 hour time. • Read and interpret line graphs • Draw line graphs • Experiment with different scales • Solve problems involving line graphs • Read and interpret tables • Two-way tables • Read and interpret timetables		**Area and Perimeter** Previous – perimeters of rectangles and compound shapes, can find missing lengths, find and compare area by counting squares. • Measure perimeter using ruler • Measure rectangular shapes • Measure more complex shapes • Calculate perimeter from given sides in compound shapes • Find missing lengths to find perimeter in compound shapes • Recap finding area by counting squares • Find area by using lxw formula • Find the area of compound shapes • Find the area of irregular shapes (using grids to support estimation)	**Assessment**	**Mop up**	**Investigations**
Spring	**Multiplication and Division** Previous – Children know all multiplication and division facts to 12x 12, multiply and divide to 3-digits using formal methods • Multiply 4 digits by 1 digit • Include use of zero and understand effect • Multiply 2 2-digit numbers using equipment and area model • Multiply 2 2-digits using formal method • Mutliply 3-digits by 2-digits • Mutliply 4-digits by 2-digits • Divide 4-digits by 1-digit (no remainders) • Divide 4-digit by 1-digit (remainders)		**Fractions** Previous – Find unit and non-unit parts of an amount, add and subtract fractions with the same denominator, find equivalent fractions, simplify • Recap children's understanding of equivalent fractions using models and images. • Convert improper fractions to mixed numbers • Convert mixed numbers to improper fractions • Count up and down in a given fraction • Find a missing number in a number sequence • Compare and order non-unit fractions **less than one** where denominators are multiples and not. • Compare and order non-unit fractions **more than one** where denominators are multiples and not. • Recap adding and subtracting fractions with same denominator • Add fractions within one where denominators are multiples • Add 3 or more fractions where denominators are multiples. • Add fractions giving a total of more than one – convert answers to mixed numbers • Add mixed numbers • Subtract fractions where denominators are multiples • Subtract a fraction from a mixed number (not breaking the whole) • Subtract a fraction from a mixed number where the whole is broken down. • Subtract two mixed numbers • Multiply a unit fraction by a whole number • Multiply a non-unit fraction by a whole number • Multiply a mixed number by a whole number • Find unit and non-unit fractions of higher multiples • Understand fractions as operators and their link to fractions of amounts e.g 5 x 3/5					**Decimals and Percentages** Previous – Recognise tenths and hundredths as decimals, compare and order decimals to 2 DP, Round 1DP to whole number. • Know place value of decimals to 2DP • Convert fractions to decimals using concrete and pictorial representations • Convert between fractions and decimals above 1 • Understand thousandths as a fraction • Understand thousandths as a decimal • Round decimals to 1,2 and 3DP to whole • Round decimals with 2 and 3DP to tenths • Order and compare decimals up to 3DP • Understand percentages out of 100 • Link percentages to fractions and decimals • Find equivalents between fractions, decimals and percentages			**Assessment**	**Mop up**		
Summer	**Decimals** • Add decimals within a whole, understanding place value • Subtract decimals within a whole, understanding the place value • Find complements to 1 whole up to 3DP • Look for complements when adding mentally. • Add decimals with the same DP • Add decimals with different DP • Subtract decimals with the same DP • Subtract decimals with different DP • Add and subtract decimals and whole numbers • Continue decimal sequences and find missing numbers • Predict terms in decimal sequences • Multiply decimals by 10, 100 and 1000 • Divide decimals by 10, 100 and 1000			**Shape** Previous – Identifying and comparing angles, names and properties of triangles and quadrilaterals, lines of symmetry • Recap types of angles and turns • Introduce reflex angles • Identify angles such as 45°, 135°, 270° using existing knowledge • Introduce a protractor • Measure acute angles with a protractor • Measure obtuse angles with a protractor • Draw lines to the nearest mm • Draw angles to 5° • Find missing angles in a straight-line • Find missing angles around a point • Identify lengths and angles in a shape, on a grid • Identify regular and irregular polygons • Identify 3D shapes from their nets, properties, plans and elevations			**Converting Measures (incl. Time)** Previous – Knows metric units for all measures, convert from larger units to smaller, read timetables • Understand term 'kilo' • Convert m to Km and g to Kg and vice versa • Understand term 'milli' • Convert from m to mm and l to ml and vice versa • Convert between different metric units • Introduce imperial measurements • Approximate conversions between metric and imperial • Convert between different units of time • Read and interpret timetables		**Position and Direction** Previous – coordinates in the first quadrant, translating a point • Read and plot coordinates in the first quadrant • Reflect shapes in a horizontal/vertical mirror line • Reflection with coordinates • Translate a shape • Translate with coordinates	**Volume** • Understand volume • Compare volume • Estimate volume • Estimate capacity	**Assessment**	**Mop up**	**Investigations**