Year 6 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 1000, numbers to 1 million, Round to powers of 10 to 1 million, negative number calculations and differences • Represent numbers to 10 million • Read and write numbers to 10 million • Compare and order numbers to 10 million • Round numbers within 10 million • Calculate involving negative numbers in a range of contexts, forwards and backwards through zero.		**Four Operations** Previous – Adding and subtracting numbers to 1,000,000, estimating, solving inverse problems, solving multistep problems, common multiples and factors, prime, square and cube numbers, multiplying and dividing by 10, 100 and 1000 • Add and subtract whole numbers of varying size • Make decisions based on best method to use • Multiply a 4 digit number by a 2 digit number • Use short division to divide up to 4 digits by 1 and 2 digits • Divide numbers using factor links • Divide a 3 digit number by a 2 digit number using long division • Divide a 4 digit number by a 2 digit number using long division • Long division involving remainders, show as remainder and fraction • Long division rounding remainders (context) • Common factors, representing in different ways • Common multiples (reasoning) • Prime and composite to 100 • Relationship between square and cube numbers • Order of operations • Efficient mental strategies • Reason from known facts				**Fractions** Previous – Converting between improper fractions and mixed numbers, finding equivalents, adding and subtracting where denominators are multiples, multiplying fractions and mixed numbers • Simplify fractions using highest common factor • Count forwards and backwards in fractions with same denominators • Count forwards and backwards with fractions where denominators are multiples • Compare and order fractions where denominators are not multiples • Compare are order fractions where the numerator is the same • Add and subtract fractions within 1 where the denominators are multiples • Add and subtract fractions within 1 where the denominators are not multiples • Add and subtract mixed numbers with any denominator • Solve problems involving adding and subtracting fractions and mixed numbers • Multiply fractions by whole numbers • Multiply fractions by fractions • Divide fractions by whole numbers where numerator is multiple of divisor • Divide fractions by whole numbers where no multiples involved • Order of operations with fractions • Find fractions of amounts and use to solve problems • Find the whole from fraction value		**Assessment**	**Decimals** Previous – order and compare decimals to 3DP, round decimals up to 3DP to whole and tenths, add and subtract with decimals, multiply and divide decimals by 10, 100 and 1000 • Understand the place value of decimals to 3 decimal places • Multiply decimals by 10, 100 and 1000 • Divide decimals by 10, 100 and 1000 • Multiply decimals by whole numbers • Divide decimals by whole numbers • Use division to solve problems up to 2 decimal places • Understand the relationship between decimals and fractions • Use place value knowledge to convert a decimal to a fraction • Know common fraction to decimal conversions • Convert fractions to decimals by making the denominator 10, 100 or 1000 • Convert fractions to decimals using division		**Position and Direction** Previous – translating and reflecting shapes in the first quadrant • Read and plot coordinates in the first quadrant. • Read and plot coordinates in all 4 quadrants • Translate shapes to all 4 quadrants • Reflect shapes into all 4 quadrants using the x and y axis
Spring	**Percentages** Previous – understand percentages out of 100, basic percentage conversions • Recap understanding of percentages out of 100 • Convert fraction to percentages by using equivalent fractions over 100 • Know equivalents between fractions decimals and percentages • Order FDP by converting • Find percentages of amount (50%, 25%, 10% and 1%) • Find percentages of amounts (multiples of 10 and 5) • Use percentages to find missing amount		**Assessment**	**Algebra** Previous – continuing sequences, finding missing numbers, reasoning about numbers in sequence • Understand terms 'input' and 'output'. • Identify 'rule' • Work backwards to find input • Identify and use two-step rules to find input and output • Use letters to form expressions • Understand how +/-/x/÷ are expressed • Substitute to find values • Substitute into common formulae • Use formulae in contexts • Form one-step equations • Solve one step equations using 4 operations • Solve two step equations • Find pairs of values working systematically • Find pairs of values involving multiples		**Perimeter, Area and Volume** Previous – find perimeter and area of compound and irregular shapes, compare volumes, estimate volume and capacity • Draw shapes that have the same area (link with factors) • Calculate area and perimeter of rectilinear shapes • Link to formulae • Estimate area of a triangle on a grid by counting • Find areas of right angled triangles (link to rectangle) • Use formula to calculate area of any triangle • Find area of a parallelogram • Find volume of cuboid by counting cubes • Use formula to find volume of cuboid	**Assessment**	**Ratio (1 week)** Previous – solve multiplication problems involving scaling • Understand the language of ratio • Make simple comparisons • Compare ratios and fractions practically • Use ratio notation • Calculate ratio using models • Enlarge shapes using scale factors • Calculate scale factors • Solve ratio and proportion problems	**Converting Units (moved from Sum)** Previous – convert between metric units and basic imperial, timetables • Red and recognise all metric measures • Convert between metric measures • Calculate with metric measures • Convert between miles and km • Know imperial equivalences	**Shape** Previous – types of angles, measure with protractor, angles in straight line, angles around a point • Measure accurately with a protractor • Understand link between angles and turns • Calculate angles on a straight line and around a point • Find vertically opposite angles • Understand angles in a triangle are 180° and link to straight line • Introduce hatch marks • Understand link between equal sides in triangle and equal angles • Make links to find missing angles in triangles • Understand angles in a quadrilateral add to 360° • Use relationships to above to find missing angles • Explore interior angles in polygons • Draw shapes accurately • Draw nets of 3D shapes			
Summer	**Statistics** Previous – line graphs and two-way tables • Read and interpret line graphs • Draw line graphs • Line graph problems • Parts of circles	**Revision**	**Mock SATs**	**Revision**	**SATs**	**APP Mop Up/Project Work**								

	• Read and interpret pie charts • Pie charts with percentages • Draw pie charts • The mean							