



Year 7						
Term 1: Autumn 1	Term 1: Autumn 2	Term 2: Spring 1	Term 2: Spring 2	Term 3: Summer 1	Term 3: Summer 2	Age Related Expectations
Number: 4 operations and rounding Purpose: To build confidence and develop skills learnt in Year 5 and 6 and to apply this throughout Year 7. Overview of the knowledge and skills covered in this unit: + , - , x , ÷ decimals - Ordering decimals - Calculator skills - Powers - Understand what Standard form is - Rounding to decimal places - Rounding to significant figures - Estimating + , - , x , ÷ negative numbers - Applying all the above to real life problem solving. Prior knowledge: - Know numbers up to 1000000 + and - numbers - Know numbers up to 12 x 12 - Multiply 3 x 2 digit numbers - Divide by 1 digit - Know square, square root and cubed numbers - Multiply and divide by 10, 100 and 1000 - Round to the nearest 10, 100, 1000 - Know the place value of decimal places	Algebra: Form and simplify Purpose: - This is an introduction into algebra for pupils as most will not have tackled this before. - This topic will be entwined within other topics in Year 7 and beyond. Overview of the knowledge and skills covered in this unit: - Understand what a term is and why 2a is different from a² + , - , x , ÷ like terms - Expand and factorise single brackets - Understand what expressions, equations and formulas are. - Write equations, including brackets and dividing - Substitute into expressions, equations and formula Prior knowledge: + , - , x , ÷ numbers - Factors - Basic substitution (a symbol for a number)	Ratio and proportion Purpose: - This unit builds upon skills learnt during years 4,5 and 6. - It allows students to take multiplication and division skills further, looking more into real life scenarios. Overview of the knowledge and skills covered in this unit: - Ratio notation - Equivalent ratios with units and exchange rates - Sharing ratio using the difference of 2 ratios - Unitary method - Direct proportion - Inverse proportion - Convert metric units - Using proportion to solve other problems, including; metric/imperial conversions, exchange rates, interpreting map scales etc. Prior knowledge: - X and ÷ numbers - Write ratio from a picture or worded problems - Equivalent ratio - Simplifying ratio - Write fractions as ratio and ratio as fractions - Writing ratio as proportions and proportions as ratio - Sharing amounts using ratio - Understand metric measurements mm, cm, m, km	Lines and angles Purpose: To build on the geometry foundations from Years 2, 3, and 5 in order to tackle more challenging and multi-step problems. Overview of the knowledge and skills covered in this unit: - Label lines and angles with correct notation . - Draw triangles accurately (ASA and SAS). - Identify parallel and perpendicular lines - Use combinations of rules to find missing angles - Understand and use corresponding, alternate, vertically opposite and co interior angles facts. Prior knowledge: - Draw and measure lines - Draw and measure angles (acute, obtuse, reflex) - Identify the difference between parallel and perpendicular lines - Calculate missing angles on a line, around a point or in a triangle	Fractions, decimals and percentages Purpose: To master essential real-world skills for things like shopping and budgeting, but also building the critical mathematical foundation needed for success in more advanced topics like algebra and statistics. Overview of the knowledge and skills covered in this unit: - Understand that a whole number can be written as a fraction over 1 - Find the fraction that is left. - Fractions of amounts + , - , x , ÷ fractions + , - , x and ÷ mixed numbers - Multipliers - Increase and decrease by percentages - Be able to convert fractions, decimal and percentages with and without a calculator. - Use converting to the same unit to compare fractions, decimals and percentages. - Solve worded, real life problems with fractions, decimals and percentages. Prior knowledge: - Write fractions from drawings - what a fraction is and name different parts of the fraction - Unit fractions - Convert between improper fractions and mixed numbers - Recognise when a fraction or mixed number is fully simplified - Simplify fractions - Find equivalent fractions and order them - Multiples - Find certain percentages e.g. 50%, 25%, 75%, 10%, 1% - Understand percent means out of 100	Data handling Purpose: - To help students move beyond just reading a graph. - They learn to collect, present, and analyze information, building the critical skills needed to interpret the world around them and prepare for more advanced topics in maths, science and Geography. Overview of the knowledge and skills covered in this unit: - Understand key words: Primary, secondary, qualitative, quantitative, discrete, continuous - Identify the mode from tally charts, bar charts and pictograms. - Find the mean, median, mode and range for a set of data. - Use the range to compare consistency. - Identify positive or negative correlation. - Use the line of best fit to estimate values. - Recognise a strong or weak correlation. Prior knowledge: - Key words: Sample, population, bias, random - Match frequency tables to bar charts and pictograms and vice versa - Be able to find a comparable value and say which is bigger/smaller - Draw a line of best fit	- To use positive and negative numbers - Adding, Subtracting, Multiplying and Dividing integers and decimals - Understanding algebraic notation - Simplifying algebraic expressions - Convert between Fractions, Decimals and Percentages - Multipliers (ratio, fractions, percentages) - Find the mode, median, mean and range from a set of data