

Upper Key Stage Two		
Year Five		Year Six
Flashback Four daily session: the children in these year groups tale part in a short, targeted return to learning from previous units, including those in previous years.		
Autumn Term	Place value (3 weeks) Children will learn to read, write, order, compare, partition and round numbers up to one million. Record numbers up to one thousand as Roman numerals. Place numbers on number lines and solve problems applying this learning. Addition and subtraction (2 weeks) Mental strategies will continue to be developed as well as written methods where children will add and subtract whole numbers with more than four digits. Round and inverse calculations to check accuracy of methods. Solve multi-step addition and subtraction problems including finding missing numbers. Multiplication and division A (3 weeks) Find common multiples and factors between two numbers. Prime, square and cube numbers will also be introduced. Multiply and divide numbers by 10, 100 and 1,000 as well as finding multiples of 10, 100 and 1.000. Fractions A (4 weeks) Children learn to find and recognise equivalent fractions for unit and non-unit fractions through the engaging maths story ‘Fractions in Disguise’. Convert between mixed and improper fractions. Compare and order fractions. Add and subtract fractions with the same denominator. Add fractions within and greater than 1. Add and subtract fractions involving mixed number fractions.	Place value (2 weeks) Read, write and investigate numbers to ten million using concrete and pictorial resources. Learning how to use and problem solve with number lines and apply this to negative numbers. Compare, order and round integers up to ten million. Use place value knowledge and power of ten to identify integers that are 10, 100, 1,000 times the size, or one-tenth, one-hundredth, one-thousandth the size of other integers. Addition, subtraction, multiplication and division (5 weeks) Add and subtract integers both mentally and in formal written methods and apply knowledge to multi-step problems. Use estimation to check for accuracy. Use their times table and division knowledge to find factors, multiples, primes numbers to 100 and square and cube numbers. Multiply up to a 4-digit number by a 2-digit number. Recap short division and learn the long division written method (chunking) including remainders. Learn the rules for the order of operations. Children of all abilities apply their learning to problem solving and reasoning activities. Fractions A and B (4 weeks) Understand equivalent fractions and simplifying. Compare and order fractions using the denominator or numerator. Add and subtract simple and mixed number fractions. Multiply fractions by integers and fractions. Divide fractions by integers. Find fractions of an amount and the whole. Converting units (1 week) Compare, convert and complete calculations with a range of metric and imperial measures including miles and kilometres.
Spring Term	Multiplication and division B (3 weeks) Multiply up to a 4-digit number by a 2-digit number using the long multiplication method (expanded) where necessary. Introduce to short division. Divide up to a 4-digit number by a 1-digit number (including questions with remainders) and choose the most efficient method. Solve problems with multiplication and division. Fractions B (2 weeks) Multiply a unit or non-unit fraction by an integer. Multiply a mixed number by an integer. Calculate a fraction of a quantity or of an amount. Use a fraction of an amount to find a whole. Look at fractions as operators. Decimals and percentages (3 weeks) Represent tenths, hundredths and thousandths and represent on a pie chart. Investigate equivalent fractions and decimals (up to hundredths). Perimeter and area (2 weeks) Use a ruler to accurately measure the perimeter of a rectangle, rectilinear shapes and polygons. Explore different methods of finding the perimeter and solve problems to find missing lengths. Find areas and missing lengths from geometric shapes including compound shapes. Estimate the area of non-rectilinear shapes. Statistics (2 weeks) Draw, read and interpret line graphs and solve problems using them. Read and interpret tables (including two-way tables and timetables) applying addition and subtraction skills as well as making comparisons.	Ratio (2 weeks) Children are introduced to ratio representing a multiplicative relationship between two amounts, ratio language and the ratio symbol whilst exploring the similarities and differences to fractions. Through the maths story book ‘Cut Down to Size at High Noon’, children will learn scale factors and scale drawing as well as solving ratio, proportion and recipe problems. Algebra (2 weeks) Recap function machines to use the inverse to find an unknown value. Form expressions from word problems and diagrams. Use substitution and formulae to find values. Form equations from word problems and diagrams. Solve 1 and 2-step equations, and solve problems with two unknown values. Decimals (2 weeks) Represent numbers up to 3 decimal places. Round, add and subtract decimals. Multiply and divide decimals by integers. Multiply and divide decimals by integers and in different contexts. Fractions, Decimals and Percentages (2 weeks) Find equivalent decimals, fractions and percentages. Order and compare decimals, fractions and percentages. Find percentages of an amount that require multiple steps and find a whole number from a given percentage. Area, Perimeter and Volume (2 weeks) Find the area and perimeter of shapes including triangles and parallelograms using formula. Find the volume of cubes and cuboids using formula. Statistics (2 weeks) Find information from and draw line graphs (including those with more than one line). Interpret duel bar charts. Read, interpret and draw pie charts including those with percentages. Find the mean from a set of data. (Link to science data collection).
Summer Term	Shape (3 weeks) Define angles in terms of degrees and as fractions of a full turn. Reflex angles are introduced explicitly. Children measure angles using a protractor. Accurately draw lines to the nearest millimetre and draw angles. Calculate missing angles on a straight line and around a point. Calculate lengths and angles in shapes. Distinguish between regular and irregular polygons and calculate sizes of missing angles. Reason and problem solve with 3-D shapes. Position and direction (2 weeks) Recap use of coordinates and investigate positions in the first quadrant. Translate coordinates and shapes. Reflect objects and coordinates using lines that are parallel to the axes. Decimals (3 weeks) Using place value and knowledge of exchange, subtract decimals within 1. Find compliments which sum to make 1 and use this to add decimals crossing the whole. Add and subtract numbers with decimals up to two decimal places. Add and subtract numbers with decimals from integers. Investigate and create decimal sequences. Multiply and divide by 10, 100 and 1,000. Negative numbers (1 week) Continue to explore negative numbers and their position on a number line. Use negative number in context, such as temperature, to be able to count back through zero. Converting units (2 weeks) Convert between millimetres, centimetres, metres and kilometres, grams to kilograms, milligrams and litres and vice versa. Choose the appropriate unit for measurement. Introduce to imperial measurements and approximate equivalences for inches, pounds and pints. Convert between different units of time and use timetables to retrieve information and solve problems. Volume (1 week) Define volume and capacity. Compare, order and estimate the volume and capacity of different solids made of cubes.	Shape (3 weeks) Recap measuring angles accurately with a protractor. Calculate missing angles by applying understanding of angles in a right angle, on a straight line and around a point. Recognise that opposite angles share a vertex and that they are equal; continue to apply knowledge of angles on a straight line. Explore interior angles in different triangles and quadrilaterals and solve missing angle problems. Draw shapes and nets of 3-D shapes accurately. Position and direction (1 week) Recap reading and plotting coordinates on the first quadrant. Read and plot coordinates in all four quadrants, draw shapes from given coordinates and find the length of a line using coordinates of its two endpoints. Use knowledge of coordinates and positional language to translating and reflecting shapes in all four quadrants. Themed projects and consolidation Throughout this unit, children will learn to apply maths and develop skills that will be essential in everyday life. Bakery unit—Children learn how to use scaling within recipes, create shopping lists for ingredients, learn the concept of profit and loss and calculate sales prices to make profits. In this project, children will also designing packages using knowledge of 3D shapes, area and volume and investigating real-life problems encountered when cooking and baking. Futures unit—children will investigate salaries and hourly rates and paying bills including mortgages. Children will complete projects to encourage maths dialogue and resilience with problem solving. Children will have opportunities for transition maths activities linked with Walton High School through a murder mystery investigation.
Rich problem solving and reasoning activities for all year groups and abilities are embedded in each unit to support the mastery approach. Toolkits allow children to make meaningful connections to prior learning enabling them to competently solve challenging problems. Mathematical dialogue and question stems ensure that mathematical vocabulary is developed and consistent across the curriculum and children can justify their reasoning with confidence. Purposeful interleaving of content ensures pupils can consolidate taught content at regular intervals.		