

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Topic:</p> <p>Knowledge and skills covered: Prime numbers, factorisation & calculating with fractions</p> <p>Numeracy Unit</p> <p>Unit 1: Prime numbers and factorisation</p> <p>Unit 2: Calculating with fractions</p> <p>Unit 3: Multiplying & dividing fractions</p> <p>Unit 1: Prime numbers and factorisation</p> <ul style="list-style-type: none"> Find the factors and multiples of a number Find prime numbers Find the prime factors of a number Determine HCF by prime factorisation Determine LCM by prime factorisation 	<p>Topic:</p> <p>Knowledge and skills covered: Negative numbers, sequences & solving equations (algebra)</p> <p>Unit 4: Positive and negative numbers</p> <p>Unit 5: Sequences, expressions and equations</p> <p>Unit 4: Positive and negative numbers (2 weeks)</p> <ul style="list-style-type: none"> Represent and order positive and negative integers on a number line using the symbols $>$, $<$ and \leq Show addition and subtraction on a number line Apply the four basic operations on positive and negative integers Calculate with rational and decimal numbers (including negative numbers) 	<p>Topic:</p> <p>Knowledge and skills covered: 2D Geometry</p> <p>Unit 6-8: draw accurate triangles and quadrilaterals and find missing angles in parallel lines</p> <p>Unit 9: length and area, parallelograms and trapezia</p> <p>Unit 6-8: draw accurate triangles and quadrilaterals and find missing angles in parallel lines (3 weeks)</p> <ul style="list-style-type: none"> Identify and name angles (e.g. POQ, x) Define an equilateral, isosceles, and scalene triangle Draw a triangle, given two angles and the side adjacent to the given angles Draw a triangle, given two sides and the included angle, Construct a 	<p>Topic:</p> <p>Knowledge and skills covered: Proportional reasoning</p> <p>Unit 10: Percentage change</p> <p>Unit 11: Ratio (equivalent, of a quantity) and rate</p> <p>Unit 10: Percentage change (2 weeks)</p> <ul style="list-style-type: none"> Use percentages greater than 100% Express one quantity as a percentage of another Compare two quantities by percentage Increase or decrease a quantity by a given percentage Understand how to compare quantities using percentages Reverse percentages: find the original quantity given a part of it and its percentage 	<p>Topic:</p> <p>Knowledge and skills covered: 3D Geometry</p> <p>Unit 12: accuracy</p> <p>Unit 13: area and circumference of a circle</p> <p>Unit 14: 3D shapes and nets</p> <p>Unit 15: surface area and volume of 3D shapes</p> <p>Unit 12: accuracy (3 lessons)</p> <ul style="list-style-type: none"> Round to decimal places, significant figures and identify rounding and truncation errors Understand the meaning of significant figures Begin to understand the concept of upper and lower bounds Use rounding and accuracy in solving problems <p>Unit 13: area and circumference of a circle (2 weeks)</p> <ul style="list-style-type: none"> Recognise and label parts of a circle 	<p>Topic:</p> <p>Knowledge and skills covered: Statistics</p> <p>Unit 16: Collect and organise data</p> <p>Unit 17: Presenting data</p> <p>Unit 18: Interpret and compare statistical representations</p> <p>Unit 16: Collect and organise data (1 week)</p> <ul style="list-style-type: none"> Take measurements Conduct surveys Classify data Read results of observations/outcomes of events <p>Unit 17: Presenting data (2 weeks)</p> <ul style="list-style-type: none"> Construct and interpret: tables, bar graphs, pictograms, line graphs, pie charts, histograms Complete a table from given data Read and interpret tables

<ul style="list-style-type: none"> Find squares, square roots, cubes and cube roots using prime factorisation Use indices to record repeated multiplication Calculate, with the use of a calculator, including squares, cubes, roots and cube roots <p>Unit 2: Calculating with fractions</p> <ul style="list-style-type: none"> Use equivalent fractions Add and subtract fractions with like denominators Add and subtract fractions with unlike denominators Add and subtract fractions, mixed numbers and improper fractions Convert between improper fractions and mixed numbers Add and subtract fractions, mixed numbers and improper fractions <p>Unit 2: Multiplying & dividing fractions</p> <ul style="list-style-type: none"> Multiply and divide fractions 	<p>Unit 5: Sequences, expressions and equations (3 weeks)</p> <ul style="list-style-type: none"> Recognise and represent number patterns (including finding an algebraic expression for the nth term) Translate simple real-world situations into algebraic expressions Use letters to represent numbers Distinguish between terms and coefficients in algebraic expressions Distinguish between like and unlike terms in algebraic expressions Add and subtract linear algebraic expressions Expand simple linear equations Solve linear equations in one unknown Solve simple fractional equations that can be reduced to linear equations Formulate a linear equation in one unknown to solve problems 	<ul style="list-style-type: none"> triangle given the length of two sides and the angle between them (accurate to 1mm and 1°) Classify special quadrilaterals on the basis of their properties: define a parallelogram, rhombus and trapezium Draw a square, given one side Draw a rectangle, given its length and breadth Draw a rhombus, given one side and one angle Draw a parallelogram, given two adjacent sides and the included angle Draw a trapezium with the parallel sides indicated, given two adjacent sides, the included angle and the angle adjacent to the included angle Understand and use right, 	<ul style="list-style-type: none"> Reverse percentages: find the original quantity when we know its final value after the percentage increase or decrease Solve problems involving percentages and reverse percentages <p>Unit 11: Ratio (equivalent, of a quantity) and rate (3 weeks)</p> <ul style="list-style-type: none"> Interpret $a : b$ and $a : b : c$, where a, b and c are whole numbers Compare two or more quantities by ratio Relate ratios to fractions Write equivalent ratios, and find the missing term in a pair of equivalent ratios Express ratios involving rational numbers in their simplest form Divide a quantity in a given ratio Find the ratio of two or three given quantities Find one quantity given the other quantity and their ratio Express one quantity as a fraction of another, or how many times one quantity is as 	<ul style="list-style-type: none"> Use formulae to calculate the area and circumference of a circle Find the area and perimeter of semi and quarter circles Solve word problems involving area and perimeter Round answers to a degree of accuracy <p>Unit 14: 3D shapes and nets (1 week)</p> <ul style="list-style-type: none"> Know names of 2D shapes Build and name 3D shapes Identify faces, vertices, edges and properties of 3D shapes Know and understand the definition of the word prism Identify and use elevations and plans of 3D shapes Recognise nets of 3D shapes <p>Unit 15: surface area and volume of 3D shapes (2 weeks)</p> <ul style="list-style-type: none"> Explore the surface area of cubes and cuboids Explore the surface area of prisms and cylinders Find the volume of cubes and cuboids Find the volume of prisms and cylinders 	<ul style="list-style-type: none"> Read and interpret line graphs Read and interpret bar graphs in both horizontal and vertical forms Read scales Complete a bar graph from given data Make picture graphs with scales Read and interpret picture graphs with scales (exclude use of an incomplete symbol/picture) Make picture graphs Use of a symbol/picture to represent one object, Read and interpret picture graphs in both horizontal and vertical forms (no scales) <p>Unit 18: Interpret and compare statistical representations (2 weeks)</p> <ul style="list-style-type: none"> Recognise the purposes and use, advantages and disadvantages of the different forms of statistical representations Draw simple inference from statistical diagrams Solve problems using information presented in tables, line graphs, bar graphs and picture graphs
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		<p>acute, obtuse and reflex angles, complementary and supplementary angles, vertically opposite angles, adjacent angles on a straight line, adjacent angles at a point, interior and exterior angles</p> <ul style="list-style-type: none"> Identify the different types of angles formed by parallel lines and a transversal such as corresponding angles, alternate angles and interior angles Use the various properties of angles to find unknown angles Find unknown angles in geometrical figures involving square, rectangle, parallelogram, rhombus, 	<p>large as another given their ratio, and vice versa</p> <ul style="list-style-type: none"> Express one quantity as a fraction of another given the two quantities Find the whole/ one part when a whole is divided into parts in a given ratio Calculate average rate Solve up to 2-step word problems involving ratio Understand and differentiate between the concepts of speed, average speed and uniform speed Use the relationship between distance, time and speed * Distance = Speed × Time, * Speed = Distance ÷ Time, * Time = Distance ÷ Speed Calculate speed, distance or time given the other two quantities Write speed in different units such as km/h, m/min, m/s and cm/s Convert from one unit of speed to another (e.g. km/h to m/s) 	<ul style="list-style-type: none"> Convert between measures of area and volume Find the volume of compound 3D shapes Explore dimensions 	
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Post Assessment-covering units 1 to 2, based on Maths Mastery which has skills practice and problem solving questions	Post Assessment-covering units 3 to 5, based on Maths Mastery which has skills practice and problem solving questions	Post Assessment-covering units 6 to 9, based on Maths Mastery which has skills practice and problem solving questions	Post Assessment-covering units 10 to 11, based on Maths Mastery which has skills practice and problem solving questions	Post Assessment-covering units 12 to 15, based on Maths Mastery which has skills practice and problem solving questions	Post Assessment-covering units 13 and 15, based on Maths Mastery which has skills practice and problem solving questions
End of year exam: AQA 2 X 1 hour, GCSE style papers, non-calculator & calculator, papers at 2 levels, classes will be directed as to which level is appropriate					

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