

		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 7	Brief summary of unit	<p><b>Using numbers</b></p> <p><b>Sequences</b></p> <p><b>Perimeter, Area &amp; Volume</b></p>	<p><b>Decimals numbers</b></p> <p><b>Working with numbers</b></p> <p><b>Statistics</b></p>	<p><b>Algebra</b></p> <p><b>Fractions</b></p> <p><b>Angles</b></p>	<p><b>Co-ordinates and graphs</b></p> <p><b>Percentages</b></p> <p><b>Probability</b></p>	<p><b>Symmetry</b></p> <p><b>Equations</b></p> <p><b>Interpreting data</b></p>	<p><b>3D shapes</b></p> <p><b>Ratio</b></p> <p><b>End of year test and Final Project</b></p>
	Detail	<p>Students will learn about decimal notations and place values, directed numbers, integers and calculations, including estimations and approximations.</p> <p>Sequences &amp; functions. Students will look at sequences and rules, missing terms, functions and mappings, using letters in equations and the nth term.</p> <p>Students will look at length, perimeter and the estimation and calculation of area for a variety of shapes. DTP: Build a farm</p>	<p>Students will learn about Fractions, decimals, percentages, adding and subtracting decimals, multiplying decimals and dividing decimals and proportion and equivalence.</p> <p>Students will look further into square numbers and square roots, non-calculator methods for multiplication and division, rounding, the four operations and BODMAS</p> <p>Students will look at mode, mean and range, use statistical diagrams (bar chart, line graph and pie charts) and probability. They will collect, use and group data. Research 2: 'The average student'</p>	<p>This topic will involve students using algebraic terms and expressions, learning the rules of algebra, equations, how they can be simplified and formulae.</p> <p>Equivalent fractions, comparing fractions, adding and subtracting fractions, mixed numbers and improper fractions, calculations with mixed numbers.</p> <p>Students will delve deeper into geometrical reasoning: lines, measuring and drawing angles, corresponding and alternate angles. Gaming: SCRATCH angles and constructing animations</p>	<p>Co-ordinates in four quadrants, graphs from relationships, Graphs of equations.</p> <p>Fractions, decimals and percentages, fractions of a quantity, calculating simpler percentages, percentages with a calculator, percentage increases and decreases.</p> <p>Probability scales, combined events, experimental probability.</p>	<p>Line symmetry and rotational symmetry, tessellations.</p> <p>Finding unknown numbers, solving equations, setting up and solving more complex equations.</p> <p>More statistics – including a deeper look at pie charts, comparing data, surveys and probabilities.</p>	<p>Students will be learning to name, draw and construct 3D shapes polygons.</p> <p>Introduction to ratios, simplifying ratios, solving problems.</p> <p>Final assessment of year Modelling: Running a business spreadsheet</p>
	Assessment	<p>Test on...</p> <p>Using numbers</p> <p>Sequences</p> <p>Perimeter, Area &amp; Volume</p>	<p>Test on...</p> <p>Decimals numbers</p> <p>Working with numbers</p> <p>Statistics</p>	<p>Test on...</p> <p>Algebra</p> <p>Fractions</p> <p>Angles</p>	<p>Test on...</p> <p>Co-ordinates and graphs</p> <p>Percentages</p> <p>Probability</p>	<p>Test on...</p> <p>Symmetry</p> <p>Equations</p> <p>Interpreting data</p>	<p>Test on...</p> <p>3D shapes</p> <p>Ratio</p> <p>End of year test</p>

		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 8	Brief summary of unit	<p><b>Negatives, factors, powers and roots, prime factors</b></p> <p><b>Angles and Constructions</b></p> <p><b>Probability</b></p>	<p><b>Percentages</b></p> <p><b>Congruent Shapes</b></p> <p><b>Surface area and volume of prisms</b></p>	<p><b>Graphs</b></p> <p><b>Powers and significant figures</b></p> <p><b>Drawing and interpreting tables and graphs</b></p>	<p><b>Algebraic expressions</b></p> <p><b>Shape and ratio</b></p> <p><b>Fractions and decimals</b></p>	<p><b>Direct and indirect proportion</b></p> <p><b>Circles</b></p> <p><b>Equations and formulae</b></p>	<p><b>Comparing distributions</b></p> <p><b>3D shapes and drawings</b></p> <p><b>End of year test and final project: Statistical Report</b></p>
	Detail	<p>Students will learn how to multiply and divide negative numbers, how to find HCF's, LCM's, how to use powers and roots and find prime factors.</p> <p>Students will work on measuring, drawing and calculating angles in shapes and on parallel lines. They will study properties of quadrilaterals and how to construct accurately. Students will translate shapes and enlarge a shape by a scale factor.</p> <p>Students will use a probability scale, calculate probabilities and study experimental probability. Students will illustrate probabilities using a Venn diagram and use sample spaces to calculate probabilities.</p>	<p>Students will learn how to write one value as a percentage of another value. Students will calculate percentage change. Challenge: Calculate changes in population</p> <p>Students will learn how to recognise congruent shapes and solve geometrical problems using congruent triangles. Problem Solving: Use scale diagrams to work out distances.</p> <p>Students will learn how to convert metric units for area and volume, how to calculate the surface area of a prism and how to calculate the volume of a prism.</p>	<p>Students will investigate the gradient of linear graphs. . Students will learn how to write an equation from its graph. They will study quadratic equations and the nature of quadratic graphs. Students will illustrate real life situations by drawing graphs. Challenge: The M25</p> <p>Students will work on multiplying and dividing by negative powers of 10 and rounding numbers to a specific number of significant figures. Students will learn to use standard form.</p> <p>Students will construct pie charts and scatter graphs. Students will draw and use lines of best fit to understand the idea of correlation.</p>	<p>Students will work on simplifying expressions (involving expressions with powers) and expanding brackets. Mathematical reasoning: Writing in algebra</p> <p>Students will learn how to use ratio to compare lengths, areas and volumes of 2D and 3D shapes. Students will enlarge shapes using fractional and negatives scale factors. Students will use map scales.</p> <p>Students will add, subtract, multiply and divide fractions and integers, as well as large decimal numbers.</p>	<p>Students will learn how to solve problems involving direct and indirect proportion using graphical and algebraic representations.</p> <p>Students will identify the parts of a circle and calculate the circumference and area of a circle. Financial skills: Athletics stadium</p> <p>Students solve a range of equations (involving brackets and fractions) and learn how to rearrange formulae. Mathematical reasoning: Using graphs to solve equations</p>	<p>Students will calculate statistics from given data, compare distributions; constructing a range of frequency diagrams. Students will recognise misleading graphs. Problem solving: Why do we use so many devices to watch TV?</p> <p>Students learn how to draw the front, side and plan view of 3D objects, how to draw 3D shapes and how to find a locus.</p> <p>Students plan to collect, present and interpret data to test a hypothesis.</p>
	Assessment	<p>Test on...</p> <p>Negatives, factors, powers and roots, prime factors</p> <p>Angles and Constructions</p> <p>Probability</p>	<p>Test on...</p> <p>Percentages</p> <p>Congruent Shapes</p> <p>Surface area and volume of prisms</p>	<p>Test on...</p> <p>Graphs</p> <p>Powers and significant figures</p> <p>Drawing and interpreting tables and graphs</p>	<p>Test on...</p> <p>Algebraic expressions</p> <p>Shape and ratio</p> <p>Fractions and decimals</p>	<p>Test on...</p> <p>Direct and indirect proportion</p> <p>Circles</p> <p>Equations and formulae</p>	<p>Test on...</p> <p>Comparing distributions</p> <p>3D shapes and drawings</p> <p>End of year test</p>

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Year 9	Brief summary of unit	<p><b>Percentages</b></p> <p><b>Equations and Formulae</b></p> <p><b>Polygons</b></p>	<p><b>Using Data</b></p> <p><b>Applications of Graphs</b></p> <p><b>Pythagoras' Theorem</b></p>	<p><b>Fractions</b></p> <p><b>Algebra</b></p> <p><b>Decimals</b></p>	<p><b>Surface Area and Volume of Cylinders</b></p> <p><b>Solving Equations Graphically</b></p> <p><b>Compound Units</b></p>	<p><b>Trigonometry</b></p> <p><b>Revision and GCSE Prep</b></p>	<p><b>Start GCSE Course</b></p>
	Detail	<p>Students will learn to calculate simple interest, percentage increases and decreases, reverse percentages, repeated percentage change and compound interest. Challenge: Exponential Growth</p> <p>Students will learn to multiply out brackets, factorise algebraic expressions and solve equations with fractions. Investigation: Body Mass Index</p> <p>Students will learn about properties of polygons, how to find internal and external angles of regular polygons and why polygons tessellate. Mathematical Reasoning: Semi-regular tessellations</p>	<p>Students will learn about scatter graphs, using correlation, two-way tables, how to estimate the mean from grouped data and cumulative frequency diagrams. Challenge: Census</p> <p>Students will learn about step graphs, time graphs and exponential growth graphs. Problem Solving: Mobile Phone Tariffs</p> <p>Students will discover Pythagoras' Theorem and use it to find a short and long side in a right-angled triangle and solve real-life and use the converse of Pythagoras' theorem to test whether triangles are right-angled. Activity: Practical Pythagoras</p>	<p>Students will learn how to add and subtract fractions, multiply and divide fractions and mixed numbers and apply this to algebraic fractions. Investigation: Fractions from one to six</p> <p>Students will learn how to expand the product of two brackets, expand expressions with more than two brackets, factorise quadratic expressions and find the difference of two squares. Challenge: Graphs from expressions</p> <p>Students will learn how to multiply and divide numbers by powers of 10, use standard form, multiply and divide with standard form and calculate upper and lower bounds. Mathematical reasoning: To the stars and back</p>	<p>Students will learn how to find the volume and surface area of a cylinder and composite shapes involving cylinders. Problem solving: packaging soup</p> <p>Students will learn how to graph equations in the form <math>ay \pm bx = c</math>, solve simultaneous equations by drawing graphs and solve quadratic and cubic equations by drawing graphs. Challenge: Maximum packages</p> <p>Students will learn how to use measures of speed, distance, time, density, mass and volume. Challenge: Population density</p>	<p>Students will learn how to find trigonometric ratios of angles, use trigonometric ratios to find angles and lengths in right-angled triangles.</p> <p>Students will revise fractions, decimals, percentages, ratio and standard form.</p> <p>Students will revise the rules of algebra, solving equations, drawing graphs, geometry and measures and statistics.</p> <p>Students will learn how to solve quadratic equations and answer GCSE style questions on a range of topics.</p>	<p>G</p> <p>C</p> <p>S</p> <p>E</p>
	Assessment	<p>Test on...</p> <p>Percentages</p> <p>Equations and Formulae</p> <p>Polygons</p>	<p>Test on...</p> <p>Using Data</p> <p>Applications of Graphs</p> <p>Pythagoras' Theorem</p>	<p>Test on...</p> <p>Fractions</p> <p>Algebra</p> <p>Decimals</p>	<p>Test on...</p> <p>Surface Area and Volume of Cylinders</p> <p>Solving Equations Graphically</p> <p>Compound Units</p>	<p>Test on...</p> <p>Trigonometry</p> <p>Revision and GCSE Prep</p>	<p>Test on...</p> <p>Start GCSE Course</p>

