Curriculum Plans: Year 9 Set 1 (Maths)

	Topic	Knowledge: By the end of the unit students will know:	Skills: What skills will students have developed by the end of this unit?	Key terms: What new key terms and vocabulary will be learnt in this unit?	Summative Assessment: How will pupils be assessed in this unit?
Michaelmas 1	Number Properties Linear equations Fractions, decimals and percentages Quadratic equations	How to find factors and multiples, write a number as a product of its prime factors and find the highest common factor and lowest common multiple. How to solve linear equations, including with brackets and fractions, and change the subject of an equation. How to convert between fractions, decimals and percentages, and calculate percentage increases and decreases. How to expand and factorise quadratic expressions and solve quadratic equations by factorising.	• Arithmetic • Multiplication • Division • Prime factor decomposition • Problem solving • Numerical operations • Numeracy • Algebra	Factor – a number that divides another leaving no remainder Multiple – a number that is in the times table of another Prime – a number with only two factors Indices – repeated multiplication written as an index Equation – an algebraic sentence with an equals sign and a specific solution Factorise – to breakdown an algebraic expression into its factors	Weekly homework set via Sparx Maths which is connected to each scheme of work and creates questions that are a combination of retrieval and current content. Half term test in the final week of the half term to formally assess students in all areas covered.
Michaelmas 2	Perimeter, Area and Volume Rounding and estimating	How to calculate the area & perimeter of parallelograms, triangles, trapeziums, circles and compound shapes. How to calculate the volume and surface area of prisms. How to round to significant figures and estimate appropriately.	• Shapes • Geometry • Measurement • Problem solving • Time management • Spatial ability • Rounding • Estimating • Algebra	Prism – a 3D shape with a uniform cross-section Arc – a section of the circumference of a circle Sector – the section between two radii of a circle	Weekly homework set via Sparx Maths which is connected to each scheme of work and creates questions that are a combination of retrieval and current content. Test in the final week of the Michaelmas term to formally assess students in all areas covered.

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	Similar Shapes Trigonometry Straight Line Graphs	To understand the properties of similar shapes and calculate missing lengths. How to use trigonometry to find missing lengths and angles in right-angled triangles. How to draw straight line graphs and how to derive their equation. How to problem solve with parallel and perpendicular lines.		Similarity – when two shapes have the same shape but are different in size	
Lent 1	Simultaneous Equations Indices Data presentation	How to solve simultaneous equations by elimination, substitution and graphically. To understand fractional and negative indices and how to evaluate and simplify expressions with these indices. How to perform calculations with standard form. How to represent data sets using pie charts and frequency polygons	• Algebra • Problem solving • Numerical operations • Numeracy • Arithmetic • Data handling	Simultaneous equations – a system of equations that must be solved together Frequency polygon - a line graph of class frequency plotted against class midpoint	Weekly homework set via Sparx Maths which is connected to each scheme of work and creates questions that are a combination of retrieval and current content. Test in the final week of the Lent term to formally assess students in all areas covered.
Lent 2	Handling data cycle Probability	How to collect, analyse and present data, including sampling techniques, two way tables and frequency trees. How to calculate combined probabilities and use tree diagrams and Venn diagrams to help solve probability problems.	• Data handling • Probability • Problem solving	Stratified sampling - divide subjects into subgroups called strata based on characteristics that they share. Venn diagrams - uses overlapping circles to illustrate the similarities, differences, and	Weekly homework set via Sparx Maths which is connected to each scheme of work and creates questions that are a combination of retrieval and current content. End of Year Exam in June to formally assess students in all areas taught in Year 9.

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				relationships between concepts, ideas, categories, or groups.	
Trinity 1	Maps and plans Sequences Constructions and loci	How to construct scale drawing and understand bearings. How to find the nth term for linear and quadratic sequences. How to construct triangles, perpendicular and angles bisectors using compasses and a ruler. How to construct loci.	• Shapes • Geometry • Measurement • Problem solving • Time management • Spatial ability • Algebra	nth term – a position-to-term formula for finding particular terms in a sequence. Locus (pl. loci) - a set of all points, whose location satisfies or is determined by one or more specified conditions.	Weekly homework set via Sparx Maths which is connected to each scheme of work and creates questions that are a combination of retrieval and current content. Half term test in the final week of the half term to formally assess students in all areas covered.
Trinity 2	Congruent triangles Rates of change	To understand the criteria for congruency and apply them to identify congruent triangles. How to perform calculations involving rates of change including speed and how to draw and interpret real-life graphs related to rates of change.	• Shapes • Geometry • Measurement • Problem solving	Congruency – when shapes are the exact same shape and size. Speed – the amount of distance covered over a particular time.	Weekly homework set via Sparx Maths which is connected to each scheme of work and creates questions that are a combination of retrieval and current content. Half term test in the final week of the half term to formally assess students in all areas covered.