Year 9	Maths Programme of study		
Term	**Unit titles**	**Learning Objectives**	**Assessment**
Autumn term 1 Sept - Oct	**Algebra** **Area and Volume**	Simplifying Expanding (1, 2 and more brackets) Factorising (including quadratics and difference of two squares) Solving linear equations Changing the Subject of a formula Area of 2D Shapes (incl. parallelogram, trapezium, circle/sector and composite shapes) Perimeter and circumference/ arc length Volume (prisms, pyramids, cylinders, cones and spheres)	Topic Test on both topics
Autumn term 2 Oct – Dec	**Pythagoras** **Number Work** **Angles and Polygons**	Finding length of long side Finding length of short side Real life Situations and Isosceles Triangles 3D applications Multiplying and Dividing Decimals Multiplying and Dividing in Standard form Rounding and approximations Upper and Lower Bounds Highest Common Factor and Lowest Common Multiple Real life Applications Angle Properties (At a point, straight line, parallel lines) Angles in Triangles and Polygons (Interior and exterior rules) Regular Polygons and Tessellations	Topic Test on all topics
Spring term 1 Jan-Feb	**Percentages** **Statistics** **Compound**	Calculating Percentages, incl. increases and decreases One quantity as a percent of another Calculating original amounts Simple and Compound Interest Repeated Percentage Change Two way tables Scatter Graphs and Correlation Mean, median, mode (from tables and grouped data) Cumulative Frequency Diagrams, Box Plots and interpretation Speed Compound Units Travel Graphs	Topic Test on all topics

	Units		
Spring term 2 Feb – March	**Trigonometry**	Using Trigonometry ratios to find angles and lengths Real life applications Trigonometry relate to isosceles triangles and to bearings	Topic Test on both topics
	Fractions	One quantity as a fraction of another Number operations with fractions and mixed numbers Algebraic fractions	
Summer term 1 April – May	**Graphs** **Ratio and Proportion** **Number Sequences**	Drawing linear graphs from tables and equations- gradient and cover up method (ax±by=c) Finding gradients and equations of lines Parallel and perpendicular graphs Real life uses of graphs Solving Simultaneous equations with graphs Step graphs Ratio Direct Proportion Better buys Continuing patterns and finding nth term Special sequences(even, odd, cube, triangular, Fibonacci) Nth term for quadratic sequences	Topic Test on all topics

Summer term 2 June – July	**Transformations, Constructions and Loci** **Scale Drawings and Bearing** **Problem Solving**	Rotational and reflectional symmetry Transformations (reflection, rotation, translation, enlargements and combinations) Congruent Triangles Bisectors Loci problems Plans and elevations Reading scale drawings and maps Drawing Scale drawings Application of scale drawings and bearings Combining skills to solve problems- numerical and word based	Year 9 exams, covering whole year teaching