KS4 Curriculum Overview: Maths						
Rationale: In year 10 we continue with the GCSE course and aim to finish at the end of year 10. Throughout the year students will look deeper into the key areas of maths; Algebra, Number, Ratio and proportion, Shape and space and Probability and statistics.						
Term / Length of Unit	**Outline**	**Assessment**	**Home Learning**	**Resources**	**Knowledge/Skills End Points**	**Reading**
Yr10 FOUNDATION Autumn 1	Ratio and Proportion Right angled triangles	Ratio and Proportion unit test Right angled triangles unit test	Set every week by individual teachers	Full SOW in shared area	Writing ratios Using ratios Ratios and measures Using proportion Proportion and graphs Pythagoras' theorem Trigonometry	**Books:** Murderous Maths: Trigonometry the Fiendish Angletron by Kjartan Poskitt **Reading strategy:** Go through key words and annotate worded problems. **Key words:** Spellings: Ratio, Trigonometry, formulae, sine, cosine, tangent, Pythagoras, Theorem Etymology: theta, sin, cos, tan,
Yr10 FOUNDATION Autumn 2	Probability Multiplicative reasoning	Probability unit test Multiplicative reasoning unit test	Set every week by individual teachers	Full SOW in shared area	Calculating probability Experimental probability Venn Diagrams Tree diagrams Growth and decay Compound measures Speed, distance, time Direct and inverse proportion	**Books:** Do you feel lucky? Murderous Maths How Tall How Short How Faraway by D Adler **Reading strategy:** Go through key words and annotate worded problems. **Key words:** Probability, Experimental, Proportion Etymology: Exponential, kilo, milli, centi, Venn, Decay
Yr10 FOUNDATION Spring 1	Constructions and loci	Constructions and loci unit test	Set every week by individual teachers	Full SOW in shared area	3D solids Plans and elevations Accurate drawings Scale drawings and maps Constructions Loci and regions Bearings	**Books:** This is Not a Maths Book: A Smart Art Activity Book **Reading strategy:** Go through key words and annotate worded problems. **Key words:** Cube, cuboid, trapezoidal, prism, ratio, protractor, compass Etymology: loci, polyhedron, isometric, tetrahedron

Yr10 FOUNDATION Spring 2	Quadratics Perimeter, area and volume	Quadratics unit test Perimeter, area and volume test	Set every week by individual teachers	Full SOW in shared area	Expanding double brackets Plotting quadratic graphs Using quadratic graphs Factorising quadratic expressions Solve quadratic equations algebraically Area and circumference of a circle Semi circles and sectors Cylinders, Pyramids, cones and spheres	**Books:** Sir Cumference and the Dragon of Pi: A Math Adventure by Cindy Neuschwander **Reading strategy:** Go through key words and annotate worded problems. **Key words:** Circumference, radius, pyramid Etymology: quadratic, circumference, theta
Yr10 FOUNDATION Summer 1	Fractions, Indices and standard form	Fraction, indices and standard form unit test	Set every week by individual teachers	Full SOW in shared area	Multiplying and dividing fractions Laws of indices Writing ordinary numbers in standard form Calculations with standard form.	**Books:** Fractions in disguise by Edward Einhorn **Reading strategy:** Go through key words and annotate worded problems. **Key words:** Denominator, Numerator, Indices
Yr10 FOUNDATION Summer 2	Congruence, similarity and vectors Algebra	Congruence, similarity and vectors unit test Algebra unit test	Set every week by individual teachers	Full SOW in shared area	Similarity and enlargement Using similarity Congruence Vectors Graphs of cubic and reciprocal functions Non linear graphs Solving simultaneous graphs graphically and algebraically Rearranging formulae Proof	**Books:** Murderous Maths: The Perfect Sausage by Kjartan Poskitt **Reading strategy:** Go through key words and annotate worded problems. **Key words:** Congruence, Similar, Reciprocal, Exponential Etymology: Cubic, Reciprocal, Vector, Exponential