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|  | **Mathematics** |
| **Term 1**  | **Term 2**  | **Term 3**  |
| **Year 10**  | *Pupils will develop an understanding of the following units of work:*  **Congruency, similarity:** using scale factors and rules to work out missing angles and enlargement. **Trigonometry:** use of ratios, revision of Pythagoras theoremCosine and Sine rules(higher) | *Pupils will develop an understanding of the following units of work:*  **Representing solutions of equations and inequalities:** Show solutions on a number line. Show solutions using straight line graphs.Solve quadratics by factorising equations. Solve quadratic inequalities (higher).**Solve simultaneous equations:**Both linear, one quadratic (higher) |  *Pupils will develop an understanding of the following units of work:* **Angles and bearings:**Draw and interpret scale drawings, Measure and read bearings, Using Pythagoras and trigonometry with bearings. **Working with circles:**Recognise parts of a circle, length of an arc, area of a section, circle theorem (higher), surface area and volume of cylinder, cone sphere  | *Pupils will develop an understanding of the following units of work.*  **Vectors**: Use and understand notation, drawing vectors. vector journeys in shapes(higher). proof of vectors(higher) to construct geometric arguments.**Ratios and fractions:**Link ratio and fractions. link ratios and graphsWrite ratio in form 1: n and n:1. **Percentages and interest:** Percentage problems, compound interest, growth and decay, compound interest. Iterative processes **Probability:** Likely outcomes, tree diagrams, Venn diagrams, Conditional probability (higher) | *Pupils will develop an understanding of the following units of work:*  **Collecting, representing and interpreting data:**Collecting data, sampling, statistical diagrams, comparing distributions and analysis **Non calculator methods:** Mental and written methods of calculation. Rational and irrational numbersUnderstand and use surds(higher). Rounding to significant figures and decimal places(revision) | *Pupils will develop an understanding of the following units of work:* **Types of number and sequences:**Factors and multiples, prime factors and LCM, nth term of a sequence (revision)Rule for quadratic sequences(higher) **Indices and roots:**The rules of indices, calculations with standard form. **Manipulating expressions:**Add, subtract, multiply and divide algebraic fractions. Both form and solve equations and inequalities fractions.  |

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|  | **Mathematics** |
| **Term 1**  | **Term 2**  | **Term 3**  |
| **Year 11**  | *Pupils will develop an understanding of the following units of work:*  **Gradients and lines:**Straight line graphsSolve simultaneous equations graphically.Perpendicular lines and their equations(higher)  **Non-linear graphs:**Quadratic, cubic, reciprocal graphsExponential graphs (higher), circle equations (higher), equations of tangent to curve (higher)**Using graphs:**Reflections in given lines, conversion graphs, real life graphs.Distance time, speed/time graphs. Graphs of proportion. Area under a graph (higher) | *Pupils will develop an understanding of the following units of work:* **Expanding and factorising****Changing the subject of formulae:**Linear equations(revision)Inequalities(revision)Change subject when it appears more than once(higher)Iteration(higher) **Functions:**Composite and inverse functionsGraphs of quadratic functionsSolve quadratic inequalities (higher) | *Pupils will develop an understanding of the following units of work:*  **Multiplicative reasoning:**Direct and inverse Proportion, density, pressure.Ratio problems Geometric reasoning: angles and parallel linesPolygonsCircle theorem (higher)Pythagoras and trigonometry (Revision)**Geometric reasoning:**Parallel lines and angles(revision). Interior and exterior angles of polygons. Circle theorem (higher). Pythagoras and trigonometry ratios (revision).Algebraic reasoning:Simplify complex expressions. Find nth term linear sequences (revision). Algebraic proofs(higher).Inequalities in two variables (higher) | *Pupils will develop an understanding of the following units of work:***Transforming and constructing:** Perform symmetry, and transformations of shapes.Identify invariant points(higher)Constructions(revision)Trigonometric graphs(higher)Translations and reflections of given functions (higher).**Listing and describing:**Product rule (higher)Sample spaces(revision)Venn Diagrams (revision) construct plans and elevations(revision)Compare distributions(revision) interpret scatter graphs(revision) | **Revision and GCSE Exam** *Exams are May/June. Lesson(s) spent revising and applying knowledge to exam questions / exam practice.****Show that:*** *vectors and congruent triangles (higher)* | **Revision and GCSE Exam** *Exams May/June. Lesson(s) spent revising and applying knowledge to exam questions / exam practice.*   |