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| **YEAR 11 CURRICULUM MEDIUM TERM PLAN - MATHS (H) Yr 11 Sept 24** |  | red rose badgepng |
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| **TOPIC** | **KEY LEARNING** | **ASSESSMENT** |
| HT 1: Multiplicative Reasoning  HT 1: Similarity and Congruence | Growth and decay. Percentage change. Iterative process. Convert metric speed measures. Calculate speed and acceleration. Bounds. Kinematics formulae. Density mass & volume. Pressure force and area. More compound measures.  Relationships in Ratio. Direct Proportion Indirect Proportion  Congruence of triangles. Conditions of congruency and their use to prove shapes ae the same. Similarity, ratios and scale factors. Finding missing lengths on similar shapes. Linear scale factors and area scale factors.  Similarity in 3d solids using lengths, areas and volumes.. | Assessment on:  Multiplicative Reasoning  Similarity and Congruence |
| HT 2: More Trigonometry  HT 2 :Further Statistics | Accuracy and bounds in trigonometry. Graphs of the sine, cosine and tangent function. Calculating areas of triangles using ½ abSinC. Calculating and using the sine rule. Calculating segments of circles. Using the cosine rule to find angles or sides.  3d Pythagoras’ Theorem. Trigonometry in 3d. Function change & trigonometric graphs.  Random Samples. Using samples to predict results for populations. Capture-recapture. Draw cumulative frequency tables and graphs. Interpret cumulative frequency tables and graphs using quartiles. Box plots. Drawing histograms. Interpreting histograms.  Comparing and describing distributions. | Assessment on:  Mock Exams |
| HT 3: Equations and Graphs  HT 3: Circle Theorems | Solving simultaneous equations graphically. Representing and interpreting inequalities graphically. Find roots of equations. Sketch quadratics. Using quadratic graphs and their roots. Solving quadratic inequalities. Cubic equations, roots and sketching. Solve quadratics and cubics using Iteration.  Use understand and prove Circle Theorems ( radii and chords, tangents, angle at centre and circumference, angle in a semi-circle, angles subtended on circumference, cyclic quadrilaterals, alternate segments). Applying circle theorems. Finding equations of tangents to a circle at a given point. | Assessment on:  Mock Exams  Practice Past Papers |
| HT 4: More Algebra  HT4: Vectors & Geometric Proof | Rearranging formulae when the subject of the formula appears twice. Rearranging formulae with powers and roots. Working with all four functions and algebraic fractions, including complex algebraic fractions. Simplifying algebraic fractions. Proof. Simplifying and expanding expressions involving surds. Rationalising denominators. Solving fractional algebraic equations. Using Function notation. Composite and inverse functions.  Use vectors & vector notation. Vector magnitude. Calculate vectors and represent them graphically. Parallel vectors. Find the resultant of two vectors. Triangle law. Parallelogram law. Expressing points as position vectors.  Vector proof, (parallel vectors and collinear points). Solving vector problems where vectors are divided in a given ratio. | Assessment on:  Practice Past Papers |
| HT5: Proportion & Graphs | Direct proportion including graphs. Constant of proportionality. Direct proportion equations including with squares and cubes.  Inverse proportion including graphs. Inverse proportion equations including with squares and cubes  Recognise and Sketch exponential functions. Calculate gradient at a tangent to a point. Area under a curve. Translating graphs of functions. Reflecting graphs of functions | Assessment on:  Practice Past Papers |
| HT6: Revision | Revision of topics from GCSE Higher course these will be determined individually by each teacher dependent upon each individual classes need. Revision from Units 1 to 10 from the Yr 10 curriculum is suggested as a starting points during this revision period. | Assessments on:  Practice Past Papers |