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|  | **YEAR 10 (H) CURRICULUM MEDIUM TERM PLAN - MATHS** | red rose badgepng |
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| **TOPIC** | **KEY LEARNING** | **ASSESSMENT** |
| HT 1:Indices, Surds & Decimals (non-calc)  HT 1: Expressions & identities | Negative numbers recap. Calculate with roots. Recognise surds. Simplify surds. Calculate with surds. Calculate and evaluate positive, zero, negative and fractional indices. Decimal calculations. Convert and calculate with standard form.  Simplify expressions & simple algebraic fractions. Use the laws of indices. Expanding single and double brackets. Recognise and use identities. Factorising linear and quadratic expressions including the difference of two squares. Proof. | Assessment on:  Indices, Surds & Decimals (non-calc)  Expressions & identities |
| HT 2: Circle Theorems  HT 2: Primes, Bounds & Calculator Methods | Review angles in polygons and around parallel lines. Label parts of circles. Know and use the 7 circle theorems  Know that a perpendicular from the centre bisects a chord. Set up and solve equations using angle facts. Prove the circle theorems.  Prime factor decomposition. Find and use HCF & LCM. Know & use prime factors. Round to Sig figs. Estimate calculations. Find upper and lower bounds including of calculations. Calculate with numbers in standard form ( using a calculator) | Assessment on:  Circle Theorems  Primes, Bounds & Calculator Methods |
| HT 3: Formulae, Simultaneous Equations &Sequences  HT3: Statistics & Probability | Rearrange formulae where the subject appears in the denominator, including fractions, power and where the subject appears twice. Solve simultaneous equations. Recognise types of sequences. Use the nth term and find an expression for the nth term of an arithmetic sequence. Continue a quadratic sequence and find the nth term of a quadratic sequence.  Calculate averages & recognise the advantages of each average. Solve reverse mean problems. Calculate range and compare data sets. Construct & use stem & leaf diagrams. Draw boxplots & find interquartile range. Draw cumulative frequency graphs. Draw scatter diagrams and understand correlation. Probability recap. Use probability diagrams for dependent & independent events | Assessment on:  Formulae, Simultaneous Equations &Sequences  Statistics & Probability |
| HT4: Quadratics  HT4: Coordinate Geometry | Solve quadratic equations by factorising, completing the square and using the quadratic formula. Plotting and sketching quadratic graphs. Including finding the turning points, roots, line of symmetry and y intercepts of quadratic graphs. Solve quadratic equations by drawing and using graphs.  Find midpoint of two co-ordinates, the distance between them and the gradient between two points. Solve co-ordinate problems. Y = mx+c. Find equations of parallel and perpendicular lines, including by rearrangement. Find the equation of a circle. Find the equation of a line that is a tangent to the circle. | Assessment on:  Quadratics  Coordinate Geometry |
| HT 5: Advanced Fractions | Rationalising the denominator. Simplify algebraic fractions by factorising and cancelling common factors. Add, subtract, multiply and divide algebraic fractions, including cancelling. Solve quadratic equations involving fractions. | Assessment on:  Advanced Fractions |
| HT6: Ratio & Proportion | Review of previous work done on ratio, connected ratio problems and converting between ratio and equations. Solve changing ratio problems and ratio problems involving subgroups. Set up equations to connect variables that are directly proportional to each other, or proportional to the square, cube, or square root of another variable. Set up equations for inverse proportion, recognising situations where variables are inversely proportional. | Assessment on:  Ratio & Proportion |