**MATHEMATICS Scheme of Work 2022-2023: YEAR 11 (OCR Syllabus)**

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| **AUTUMN TERM 1: SEPT - OCT** | **AUTUMN TERM 2: OCT - DEC** | **SPRING TERM 1: JAN - FEB** |
| **Number, Algebra, Geometry and Statistics** | **Geometry, Probability and Number** | **Geometry, Number and Algebra** |
| **AO: to revise and consolidate knowledge that were previous areas of confusion.**  Year 11 have substantially finished the GCSE course now, so we are going through previous areas of confusion, revising for the mock exams.  **Main text: Hodder GCSE Foundation Maths text books.**  **Number topics:**  Index notation, the laws of indices, standard form.  Rounding, approximation and estimation, limits of accuracy.  Calculating with decimals, converting recurring decimals to exact fractions.  **Algebra topics:**  Multiplying two binomials, factorising quadratics, completing the square, algebraic fractions.  **Geometry topics:**  Angles with parallel lines, angles in polygons. Standard units of measurement, compound units. Volume and surface area.  **Statistics topics:**  Pie charts, cumulative frequency curves, histograms, misleading graphs, scatter graphs.  Also, baseline and number age tests. | **AO: to revise and consolidate knowledge that were previous areas of confusion.**  Year 11 have substantially finished the GCSE course now, so we are going through previous areas of confusion, revising for the mock exams.  **Main text: Hodder GCSE Foundation Maths text books.**  **Geometry topics:**  Congruent triangles, applications and proofs.  Similar triangles.  Enlargements and similar shapes.  Straight line graphs, parallels, perpendiculars and tangents.  Graphs of quadratic functions, circles.  The four isometric transformations.  **Probability topics:**  Working with probability, representing combined events, theoretical probability, conditional probability.  **Number topics:**  Sharing in a given ratio, direct proportion, algebraic and graphical representations, direct and inverse proportion.  **Mock exams.** | **AO: to revise and consolidate knowledge that were previous areas of confusion.**  Year 11 have substantially finished the GCSE course now, so we are going through previous areas of confusion, revising for the mock exams.  **Main text: Hodder GCSE Foundation Maths text books.**  **Geometry topics:**  Vector notation and representation.  Vector arithmetic.  Using vectors in geometric proofs.  Graphs of real world contexts, gradients, areas under graphs.  **Number topics:**  Approximation and exact values of surds, manipulating surds, working with surds.  Trig ratios, exact values of trig ratios, sine cos and area rules, graphs of trig functions.  **Algebra topics:**  Quadratic equations, simultaneous equations, graphical solutions, iteration. |
| **SPRING TERM 2: FEB - MAR** | **SUMMER TERM 1: APR - MAY** | **SUMMER TERM 2: JUN - JUL** |
| **Number, Geometry and Algebra** | **Number, Statistics, Geometry and Algebra** | **Algebra and Geometry** |
| **AO: to revise and consolidate knowledge that were previous areas of confusion.**  Year 11 have substantially finished the GCSE course now, so we are going through previous areas of confusion, revising for the mock exams.  **Main text: Hodder GCSE Foundation Maths text books.**  **Number topics:**  Sequences and patterns, nth term, functions, special sequences.  **Geometry topics:**  Bearings, 3D shape (drawing and properties).  **Algebra topics:**  Expressing algebraic inequalities, number lines and set notation, solving and graphing liner inequalities. | **AO: To complete past papers, filling knowledge gaps, in preparation for GCSE’s.**  Pupils are now free to complete past papers and revise/study their own knowledge gaps, with my help.  **Main text: Hodder GCSE Foundation Maths text books, past papers.**  Structured revision is now complete. Pupils are to complete past papers, (with my help) identify their own knowledge gaps and fill them, ready for the GCSE’s. | **AO: To complete past papers, filling knowledge gaps, in preparation for GCSE’s.**  Pupils are now free to complete past papers and revise/study their own knowledge gaps, with my help.  **Main text: Hodder GCSE Foundation Maths text books, past papers.**  Structured revision is now complete. Pupils are to complete past papers, (with my help) identify their own knowledge gaps and fill them, ready for the GCSE’s. |