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| Subject: **Mathematics** |
| Group/ Year: **Year 10** |

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| **Progress Pathway** |  | | | | | |
| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** | |
| **Basic foundation content** | **Using Number**  ***Non-calculator Methods***   * Use four operations with integers (positive and negative), decimals and fractions with and without context * Work with exact answers eg. Area and Volume * Evaluate calculations involving percentages   **Proportions and Proportional Change**  ***Percentages and Interest (1)***   * Convert Fractions, decimals and percentages * Find Percentages and percentage changes | **Proportions and Proportional Change**  ***Percentages and Interest (2)***   * Find one number as a percentage of another * Calculate simple and compound interest * Evaluate exponential change eg. Depreciation * Find original values   **Proportions and Proportional Change**  ***Ratio and Fractions***   * Use ratios, including with mixed units * Fractions in ratios * Fractions from ratios * Combining ratios * Unit pricing ('best buys') * Currency conversions | **Proportions and Proportional Change**  ***Probability***   * Review of single event probability - comparing theoretical and experimental * Understand and work with mutually exclusive and independent events * Construct and interpret tree diagrams * Find probability from frequency trees, tables and Venn diagrams   **Developing Algebra**  ***Representing Solutions of Equations and Inequalities (1)***   * Form and solve equations and inequalities in a variety of contexts, including with unknowns on both sides * Represent solutions to inequalities on a number line | **Developing Algebra**  ***Representing Solutions of Equations and Inequalities (2)***   * Represent solutions to equations graphically   **Similarity**  ***Congruence, Similarity and Enlargement***   * Understand the difference between congruence and similarity * Enlarge a shape about a given point; understand and use similarity * Find missing sides in similar shapes including pairs of similar triangles * Understand and use the conditions for a pair of congruent triangles | **Geometry**  ***Angles and Bearings***   * Review KS3 angle rules * Understand and use bearings   **Geometry**  ***Working with Circles***   * Review area and circumference * Name parts of a circle and perform related calculations * Find areas and volumes related to circles - cylinder, cone, sphere etc. | **Delving into Data**  ***Collecting, Representing and Interpreting Data***   * Understand sampling including the possible limitations * Construct and interpret tables and line graphs for time series data * Understand and represent with grouped data * Understand and identify correlation * Use lines of best fit, understanding the dangers of extrapolation * Construct and interpret frequency polygons * Evaluate measures of location and dispersion * Use statistical diagrams and measures to compare distributions | |

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| Progress Pathway |  | | | | | |
| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| **Additional foundation content** |  |  |  | **Developing Algebra**  ***Simultaneous Equations***   * Understand the meaning of solution, appreciating that some equations have multiple solutions * Form and solve a pair of linear simultaneous equations graphically * Form and solve a pair of linear simultaneous equations algebraically | **Similarity**  ***Trigonometry***   * Understand trigonometric ratios * Work out missing angles in right-angled triangles * Know and use the exact values of key angles | **Geometry**  ***Vectors***   * Understand vector notation * Vector arithmetic - addition, subtraction and multiplication by a scalar * Vectors and translations |