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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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| **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
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