### Curriculum and Assessment Map 2019-2020

**Subject: Mathematics**

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#### Year 8

<table>
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<tr>
<th>Key Learning Constructs to be developed over the academic year</th>
<th>Scheme of Learning Autumn Term</th>
<th>Scheme of Learning Spring Term</th>
<th>Scheme of Learning Summer Term</th>
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</table>
| **Number** – to become fluent in a range of numerical methods. | Part 1  
1. Scale Drawings and Bearings  
2. Negative numbers and substitution  
3. Sequences  
4. Brackets and solving equations  
5. Decimals and Fractions  
6. Pythagoras  
7. Drawing Views  | Part 3  
1. Plotting Quadratic graphs  
2. Factorising  
3. Percentages  
4. FOIL  
5. Averages for Frequency Tables  
6. Frequency polygon  
7. Basic congruency  
8. Angles in a polygon  | Part 5  
1. 9 pins investigation  
2. Simultaneous Equations  
3. Indices  
4. Standard Form  
5. Area/Perimeter of shapes involving Circles  
6. Change Subject  |
| **Algebra** – to become fluent in a range of algebra techniques. | Part 2  
1. Volume  
2. Perfume investigation  
3. Trial and Improvement  
4. Transformations and enlargement  
5. Stem and leaf  
6. Scatter graphs  | Part 4  
1. y=mx+c  
2. Solving and Graphing Inequalities  
3. Compound measures  
4. Probability of Two Events  
5. Rounding to Significant Figures and estimating  
6. Error Bounds  |  |
| **Geometry** – To become fluent in their knowledge of a range of shape and space topics. |  |  |  |
| **Probability and Statistics** – To become fluent in data and probability. |  |  |  |
| Can solve problems by applying their mathematics to a variety of routine and non-routine problems, including breaking down problems into a series of simpler steps. |  |  |  |

#### Assessment Pieces

| Part 1 Test  
Perfume Investigation  
Part 2 Test | Part 3 Test  
Part 4 Test | Pins Investigation  
Board game investigation  
Part 6 Test |

#### Key vocabulary

**Outside the taught curriculum**

Dr Frost Maths website, Maths Support, UKMT Maths challenge and Puzzles club

**Suggested reading**

Aha! Insight & aha! Gotcha by Martin Gardner (Age 11+)

Entertaining Mathematical Puzzles by Martin Gardner (Age 11+)

My Best Mathematical and Logic Puzzles by Martin Gardner (Age 11+)