

## Programme of Study – Maths

### Foundations for learning

We want to develop students who are engaged and curious about mathematics, and confident in **problem solving** because they are **proficient** at **reasoning**, and **fluent** with key maths concepts. Our teachers will be engaged and curious about students' learning. Students know where logical thinking can take them in life.

Year 7 – 9 – Specialist Centre



Curriculum

| Year 7                  |  |   |   |  |  |  |
|-------------------------|--|---|---|--|--|--|
| Rationale/<br>narrative | This is the first year of secondary school maths that students will study. We have designed the curriculum to develop number sense and place value first, as these are the building block of deep understanding. |   |   |  |  |  |
|                         | Autumn 1   | Autumn 2  | Spring 1  | Spring 2   | Summer 1   | Summer 2   |
| Topic                   | Making generalisations about the number system (1)<br><b>Number</b>  | Making generalisations about the number system (2)<br><b>Algebra</b>  | 2D Geometry<br><b>Geometry</b>  | The Cartesian plane<br><b>Geometry</b>   | Fractions<br><b>Number</b>   | Ratio and proportion<br><b>Ratio and Proportion</b>                                      |
| Content                 | <p>Knowledge and skills covered:</p> <p>Unit 1 – numbers and numerals</p> <p>Unit 2 – axioms and arrays</p> <p>Unit 3 – factors and multiples</p>  | <p>Knowledge and skills covered:</p> <p>Unit 5 – positive and negative numbers</p> <p>Unit 6 – expressions, equations, inequalities</p> | <p>Knowledge and skills covered:</p> <p>Unit 7 – angles</p> <p>Unit 8 – classifying 2D shapes</p> <p>Unit 9 – constructing triangles and quadrilaterals</p> | <p>Knowledge and skills covered:</p> <p>Unit 10 – co-ordinates</p> <p>Unit 11 – area of 2D shapes</p> <p>Unit 12 – transforming 2D figures</p> | <p>Knowledge and skills covered:</p> <p>Unit 13 – prime factor decomposition</p> <p>Unit 13 – equivalent fractions</p> <p>Unit 14 – all operations acting on fractions</p> | <p>Knowledge and skills covered:</p> <p>Unit 15 – ratio</p> <p>Unit 16 - percentages</p> |





Curriculum

| Year 8                  |  |   |  |  |   |   |
|-------------------------|--|---|--|--|---|---|
| Rationale/<br>narrative | Our Year 8 curriculum is designed to build on the foundations created in Year 7, where students will spend more time working with algebra, and making links across topics. |   |  |  |   |   |
|                         | Autumn 1   | Autumn 2  | Spring 1   | Spring 2   | Summer 1  | Summer 2  |
| Topic                   | Equations and inequalities<br>Number + Algebra   | Graphs<br>Algebra   | Proportional Reasoning<br>Ratio and Proportion   | Representations and reasoning with data<br>Probability & Statistics  | Angles<br>Geometry  | Area, volume and surface area<br>Geometry   |
| Content                 | <p>Knowledge and skills covered:</p> <p>Unit 1 – Sequences</p> <p>Unit 2 - Forming and Solving Equations</p> <p>Unit 3 – forming and solving inequalities</p>              | <p>Knowledge and skills covered:</p> <p>Unit 4 – linear graphs and identify key features of linear graphs</p> <p>Unit 5 – accuracy and estimation</p> | <p>Knowledge and skills covered:</p> <p>Unit 6 – ratio</p> <p>Unit 7 - Real life graphs and rate</p> <p>Unit 8 – direct and inverse proportion</p> | <p>Knowledge and skills covered:</p> <p>Unit 9 – univariate data (construct and interpret charts and graphs, mean, mode, median, range)</p> <p>Unit 10 – bivariate data (scatter graphs)</p> | <p>Knowledge and skills covered:</p> <p>Unit 11 – angles in parallel lines and polygons</p> <p>Unit 12 – bearings</p> | <p>Knowledge and skills covered:</p> <p>Unit 13 – circles and composite shapes</p> <p>Unit 14 – volume of prisms</p> <p>Unit 15 – surface area of prisms.</p> |



