Southern International School Mathematics Curriculum: Journey on a page 2024/2025

Year 7: KS3

- *Autumn 01 –Place value, rounding, decimals, money.*
- *Autumn 02 – fractions, percentages, directed numbers, time.*
- *Spring 01 – Sequences, introduction to Algebra.*
- *Spring 02 – Linear Algebra, lines and coordinates.*
- *Summer 01 – Area, volume and introduction to probability.*

Year 8: KS3

- *Autumn 01 – Arithmetic, Positive & Negative numbers, Fractions/decimals/percentages, Area & Volume, Shapes, alternate/corresponding angles, interior/exterior angles*
- *Autumn 02 – Algebra, write and solve equations, one step and two step, Measurement*
- *Spring 01 – Statistics, Graphs*
- *Spring 02 – Linear Algebra and line graphs, Probability*
- *Summer 01 – Percentage & Decimals, Straight line graphs, Project*

Year 9: KS3

- *Autumn 01 – Scatter Graphs, Probability, Expressions & Equations, Simultaneous equations, Circles*
- *Autumn 02 – Proportion, Sequences, Constructions & Loci, Inequalities*
- *Spring 01 – Right-angled triangles, Factorise, Standard Form,*
- *Spring 02 – Percentages, Bounds, Standard Form*
- *Summer 01 – Maps/Scale drawing, Set Notation & Venn diagrams, Prime Factors, Surds, Straight Line graphs*

Year 10: IGCSE

- *Autumn 01 – Indices, Formula, Linear Algebra*
- *Autumn 02 – Angle geometry and trigonometry*
- *Spring 01 – Functions, Quadratics*
- *Spring 02 – Mensuration*
- *Summer 01 – Probability, Data analysis and statistics*

Year 11: IGCSE

- *Autumn 01 –Equations, sequences and patterns, graphs*
- *Autumn 02 – Loci, transformations, geometry*
- *Spring 01 –Variation, 3D geometry, Vectors*
- *Spring 02 – Revision and Communication*
- *Summer 01 – Revision; Examinations*

Year 12: AS

- *Autumn 01 – Pure Maths 1*
- *Autumn 02 - Pure Maths 1*
- *Spring 01 – Statistics & Probability 1*
- *Spring 02 – Statistics & Probability 1*
- *Summer 01 – Revision & Exams*

Subject Curriculum Intent: 'Mastery in Mathematics'

There is a termly plan for each year group, each with a common theme. Each term is split into blocks that ensure students spend enough time to gain a deep understanding of the topic being covered. Our scheme of learning has been designed with interleaving (revisiting topics within new context) as a key element. For example, Year 7 starts with numbers and goes on to develop algebraic skills, which is then woven throughout the year, so students reinforce and extend their knowledge and understanding.

We firmly believe that students who are successful with numbers are much more confident mathematicians, so we emphasise number work throughout. We also recognise, however, that arithmetic can be a barrier to some students accessing other areas of the curriculum, so we have also incorporated the teaching and learning of calculator skills – alongside estimation – throughout the curriculum. Our scheme is designed so that any student following the main content will have covered all of the IGCSE Core tier by the end of Year 11 and therefore will have access to a grade C. Students who have also covered additional Extended content will have access to a Grade A.*

SIH Mathematics students learn to:

- *Develop an understanding of mathematical principles, concepts and methods in a way which encourages confidence, provides satisfaction and enjoyment, and develops a positive attitude towards mathematics*
- *Develop a feel for number and understand the significance of the results obtained*
- *Apply mathematics in everyday situations and develop an understanding of the part that mathematics plays in learners' own lives and the world around them*
- *Analyse and solve problems, present the solutions clearly, and check and interpret the results*
- *Recognise when and how a situation may be represented mathematically, identify and interpret relevant factors, select an appropriate mathematical method to solve the problem, and evaluate the method used*
- *Use mathematics as a means of communication with emphasis on the use of clear expression and structured argument*
- *Develop an ability to apply mathematics in other subjects, particularly science and technology*
- *Develop the ability to reason logically, make deductions and inferences, and draw conclusions*
- *Appreciate patterns and relationships in mathematics and make generalisations*
- *Appreciate the interdependence of different areas of mathematics*
- *Acquire a foundation for further study of mathematics or for other disciplines.*