BRANNEL SCHOOL
EXCELLENCE | CREATIVITY | COMMUNITY

Curriculum Summary Document

Year 11 – Maths

Term	Classes	What will students learn?	How does this prepare students for success at GCSE?
Autumn Term 1 **September**	**4+ Classes** **5+ Classes**	In this section, students strengthen the building blocks of mathematics by revisiting prime numbers, highest common factors (HCF) and lowest common multiples (LCM). They also deepen their understanding of fractions, decimals, and percentages — vital skills for everyday life and higher-level maths. Alongside this, students move into more advanced algebra, expanding and factorising expressions, and solving simultaneous equations. They also explore key geometric tools such as Pythagoras' Theorem and trigonometry, which allow them to calculate unknown lengths and angles in right-angled triangles. Together, these topics give students a strong toolkit for tackling both numerical and algebraic problems.	This learning strengthens essential number, algebra and geometry foundations needed for GCSE. Students practise multi-step reasoning, selecting efficient methods, and applying skills in varied contexts to build exam-ready confidence.
	X Classes **6+ Classes** **7+ Classes** **8+ Classes**	In this part of the course, students cover a wide range of mathematical ideas that connect diagrams, geometry, and algebra. They will explore transformations (how shapes move, turn, reflect, or resize), use trigonometry to calculate unknown sides and angles in triangles, and apply this knowledge to real-world contexts such as bearings in navigation and interpreting plans and elevations in design. Alongside this, students begin to study graphical transformations and functions, learning how equations link to graphs and how these graphs can be shifted, stretched, or reflected. This combination of geometry, algebra, and visual reasoning helps them make sense of both abstract and practical problems.	This sequence builds GCSE readiness by developing secure application of trigonometry, transformations, bearings and graphical interpretation. Students learn to justify steps, interpret diagrams accurately, and connect algebra, geometry and real-world contexts.
Autumn Term 2 **October**	**4+ Classes** **5+ Classes**	In this section, students develop their proportional reasoning by working with ratio and compound measures such as speed, density, and pressure. They also continue to build their statistical skills, learning to present and interpret data in different ways, while strengthening their understanding of 3D shapes through volume and surface area. Sequences are introduced and extended, allowing students to recognise patterns and link them to algebraic rules, while linear graphs are revisited to consolidate the connections between equations and their graphical representations. Together, these topics help students apply mathematics to both abstract and real-life contexts.	This section prepares students for GCSE by developing confident use of ratio, measures, statistics, sequences and graphs. Students practise applying methods flexibly in worded and data-driven problems, strengthening reasoning and precision.

BRANNEL SCHOOL
EXCELLENCE | CREATIVITY | COMMUNITY

Curriculum Summary Document

Year 11 – Maths

	X Classes **6+ Classes** **7+ Classes** **8+ Classes**	In this unit, students tackle more advanced algebra and data skills. They learn to work confidently with algebraic fractions, simplifying and solving equations that involve both numerators and denominators. Alongside this, they study bounds and inequalities, which develop their understanding of accuracy, estimation and mathematical reasoning, as well as how to represent inequalities on graphs. Students also revisit linear graphs, strengthening their ability to interpret and plot equations in the form $y = mx + c$. Finally, they develop their statistical knowledge by working with data, enabling them to analyse and interpret information in a meaningful way.	This unit prepares students for GCSE by deepening fluency with algebraic fractions, bounds, inequalities and graphs. Students explain methods clearly, tackle multi-step algebraic problems and interpret data with accuracy—all essential exam skills.