



AVANTI GRANGE

SECONDARY SCHOOL

Curriculum Map

Subject: Maths

Vision: The vision of Avanti Grange's Mathematics Department is centered on fostering a genuine love for mathematics among students. Our primary objective is to facilitate the development of students' conceptual understanding and mastery of fundamental mathematical skills through consistent and diverse practice with progressively challenging problems. We aim to empower students to swiftly and accurately recall and apply their mathematical knowledge. Our department is committed to providing students with ample opportunities to promote intellectual curiosity and prepare students for the demands of everyday life and future employment.

End Points:	Domains of Knowledge:	Key Concepts:
1. Knowledge of rational and irrational numbers and their representations, including fluency in arithmetic with all types of rational and irrational numbers.	Number	Place value, rational number, irrational numbers, approximation, order of operations, number relationships
2. Knowledge of multiplicative relationships, how to interpret and apply them in various contexts, and how to represent multiplicative relationships in terms of ratio, proportion and rates of change	Ratio, Proportion and Rates of Change	Proportional reasoning, ratio, rates of change, scaling
3. Knowledge of how to use algebra to represent generalisations of numerical principles, both linear and non-linear, and how to find unknown quantities using algebraic techniques.	Algebra	Expressions, equations, inequations, formulae, functions, linearity, non-linearity, graphs, sequences, sets
4. Knowledge of how the geometry of two - and three - dimensions is used to understand and interpret the space around us.	Geometry and Measures	Length, area, volume, angles, trigonometry, circles, polygons, solids, Euclidean geometry, vectors, congruence, similarity
5. Knowledge of how data is collected, analysed and presented, and how chance is evaluated, to help understand an unpredictable world.	Statistics and Probability	Analysis of data, representation of data, combinations, probability, sets

[illegible]

	Standard form	Algebraic fractions	Polygons	Percentages	Trigonometry	Surds
	Expanding and factorising quadratics	Pythagoras Theorem	Straight line graphs	Compound units	Solving quadratics	Inequalities
	Data	Solving equations	Surface area and volume	Solving equations graphically	Laws of indices	Exam style and problem solving questions