Mathematics Curriculum Intent and Overview

To inspire the next generation to enjoy a deep understanding of mathematics and to become both independent and resilient learners who can apply their reasoning and problem-solving skills to life beyond De La Salle School.

Focus	Intent
Mastery	To develop a deeper understanding of mathematics which enables students to become fluent in mathematics.
Challenge	To challenge and stretch students in every lesson.
Embedding knowledge	To develop students' retrieval skills to embed cumulative knowledge.
Independent Learning	To develop students to become independent learners.
Problem Solving Skills	To develop reasoning and problem-solving skills to apply their mathematical skills to solve real life problems.
Progress Tracking	To closely monitor and track student progress throughout their five years at De La Salle School to ensure every student makes at least expected progress.
Academic Achievement	To continuously improve on the examination success for all our students.
Inspiration	To inspire the next generation of mathematicians to be prepared for life beyond De La Salle School

Curriculum outline: Years 7 & 8

	Autumn Term	Spring Term	Summer Term
7	● Sequences ● Algebraic notation ● Equality and equivalence ● Place value and ordering ● Fractions, decimals and percentage equivalence	● Solving problems with addition and subtraction ● Solving problems with multiplication and division ● Fractions and percentages of amounts ● Directed numbers ● Addition and subtraction of fractions	● Construction and measuring ● Geometric reasoning ● Developing number sense ● Sets and probability ● Prime numbers and proof
8	● Ratio and scale ● Multiplicative change ● Multiplying and dividing fractions ● Working in the Cartesian plane ● Representing data ● Tables and probability	● Brackets, equations and inequalities ● Sequences ● Indices ● Fractions and percentages ● Standard index form ● Number sense	● Angles in parallel lines and polygons ● Area of trapezia and circles ● Line symmetry and reflection ● The data handling cycle ● Measures of location

Curriculum outline: Years 9 - 11

Year 9	Autumn Term	Spring Term	Summer Term
Higher **Sets 1 & 2**	• Calculations and rounding • Indices, roots and order of operations • Factors, multiples and primes • Standard form • Algebra: The basics • Equations • Formulae	• Inequalities • Sequences and drawing linear graphs • Averages and range • Collecting, representing and interpreting data • Fractions	• Percentages • Ratio and proportion • Probability 1 • Perimeter, area and circles
Intermediate **Sets 3 & 4**	• Calculations and rounding • Indices, roots and order of operations • Factors, multiples and primes • Standard form • Algebra: The basics	• Equations • Formulae • Inequalities • Sequences and drawing linear graphs	• Averages and range • Collecting, representing and interpreting data • Fractions • Percentages
Foundation **Sets 5 & 6**	• Integers • Decimals • Indices, powers and roots • Factors, multiples and primes • Algebra: The basics	• Sequences • Averages and range • Representing and interpreting data	• Fractions • Fractions, decimals and percentages • Percentages 1 • Polygons and angles 1

Year 10	Autumn Term	Spring Term	Summer Term
Higher **Sets 1 & 2**	• Volume and surface area • Polygons and angles • Transformations • Scatter graphs • Constructions, loci and bearings • Pythagoras' Theorem and trigonometry • Compound measures	• Linear graphs • Real-life graphs and coordinate geometry • Quadratic, cubic and other graphs • Cumulative frequency, box plots and histograms • Circle theorems	• Probability 2 • Further trigonometry • Further graphs • Surds • Further algebra
Intermediate **Sets 3 & 4**	• Ratio and proportion • Probability • Perimeter, area and circles • Volume and surface area • Polygons and angles	• Transformations • Scatter graphs • Constructions, loci and bearings • Pythagoras' Theorem and trigonometry	• Compound measures • Linear graphs • Real-life graphs and coordinate geometry

Foundation **Sets 5 & 6**	• Perimeter and area • 3D shapes, volume and surface area • Probability 1 • Ratio • Proportion • Equations	• Formulae • Inequalities • Transformations • Circles • Linear graphs	• Real life graphs • Scatter graphs • Statistics and sampling • Probability 2 • Construction, loci and bearings

Year 11	**Autumn Term**	**Spring Term**	**Summer Term**
Higher **Sets 1 & 2**	• Direct and inverse proportion • Similarity and congruence • Functions • Cones, spheres and pyramids • Accuracy and bounds • Quadratic and simultaneous equations	• Vectors • Exponential functions and geometric progressions • Trigonometric graphs and transformations of functions • Circle geometry	Exam preparation
Intermediate **Sets 3 & 4**	• Quadratic, cubic and reciprocal graphs • Accuracy and bounds • Quadratic and simultaneous equations • Similarity and congruence • Vectors	Focused revision of topics identified from mini mocks and mock exams	Exam preparation
Foundation **Sets 5 & 6**	• Indices and standard form • Percentages 2 • Compound measures • Angles 2 • Accuracy and bounds • Similarity and congruence • Pythagoras' Theorem • Vectors	• Quadratic, cubic and reciprocal graphs • Quadratics • Simultaneous equations • Trigonometry	Exam preparation