Our Lady Queen of Peace
Catholic Engineering College

Curriculum Overview

Year 11 Mathematics (Foundation)

	Knowledge & Understanding			Subject Specific Literacy Development		Cultural Capital / Enrichment Opportunities
	Composites (Bigger Picture)	**Components (Key Concepts)**	**Recall & Retrieval Practice Focus**	**Read Like A... Focus**	**Key Vocabulary**	
Half Term 1	**Circles, Cylinders, Cones and Spheres**	Identify, name and draw parts of a circle Find circumferences and areas enclosed by circles Find radius/diameter, given area/perimeter of a circles Calculate perimeters and areas of composite shapes made from circles and parts of circles Calculate arc lengths, angles and areas of sectors of circles (including halves and quarter circles) Find the surface area and volume of a cylinder Find the surface area and volume of spheres, pyramids, cones and composite solids	Key skills from Y10 HT6 Class specific based on Y10 AC3 QLA	Multi-step reasoning problems. Draw and interpret mathematical diagrams.	Tangent – Chord – Circumference – Radius – Diameter –	Through Read Like a Mathematician this half term
	Similarity and Congruence in 2D	Use the basic congruence criteria for triangles Solve angle problems involving congruence Identify the scale factor of an enlargement of a shape as the ratio of the lengths of two corresponding sides Understand the effect of enlargement on perimeter of shapes Solve problems to find missing lengths in similar shapes Know that scale diagrams			Similarity – Congruence – Scale Factor –	
	Vectors	Understand and use column notation in relation to vectors Be able to represent information graphically given column vectors Identify two column vectors which are parallel Calculate using column vectors, and represent graphically, the sum of two vectors, the difference of two vectors and a scalar multiple of a vector.			Vector – Scalar –	
	Quadratic Equations	Multiply together two algebraic expressions with brackets Square a linear expression Factorise quadratic expressions of the form $x^2 + bx + c$ Factorise a quadratic expression $x^2 – a^2$ using the difference of two squares Solve quadratic equations by factorising Find the roots of a quadratic function algebraically			Quadratic – Factorise – Roots –	

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Half Term 2	**Quadratic Graphs**	Generate points and plot graphs of quadratic functions Find approximate solutions to quadratic equations using a graph Interpret graphs of quadratic functions from real-life problems Identify and interpret roots, intercepts and turning points of quadratic graphs.	Circle, Cones and Spheres Similarity and Congruence Vectors Quadratic Equations	Multi-step reasoning problems. Draw and interpret mathematical diagrams.	Approximate Solutions – Turning Points –	Through Read Like a Mathematician this half term
	Rearranging Equations and Graphs of Cubic and Reciprocal Functions	Change the subject of a formula involving the use of square roots and squares Answer 'show that' questions using consecutive integers, squares, even numbers and odd numbers Solve problems involving inverse proportion using graphs, and read values from graphs Find the equation of the line through two given points Recognise, sketch and interpret graphs of simple cubic functions Recognise, sketch and interpret graphs of the reciprocal function $y = 1/x$ with $x \neq 0$; Use graphical representations of inverse proportion to solve problems in context; identify and interpret the gradient from an equation $ax + by = c$;			Equation – Identity – Subject of a Formula –	
Half Term 3	**Simultaneous Equations**	Write simultaneous equations to represent a situation Solve simultaneous equations (linear/linear) algebraically and graphically Solve simultaneous equations representing a real-life situation, graphically and algebraically, and interpret the solution in the context of the problem	Key skills from HT1 & 2 Class specific based on QLA	Multi-step reasoning problems. Draw and interpret mathematical diagrams.	Unknowns – Linear – Elimination –	Through Read Like a Mathematician this half term
	Bespoke Scheme of Work	Content based on Question Level Analysis from Rehearsal Exam 1				
Half Term 4	**Bespoke Scheme of Work**	Content based on Question Level Analysis from Rehearsal Exam 2	Class specific based on QLA	Multi-step reasoning problems. Draw and interpret mathematical diagrams.		Through Read Like a Mathematician this half term

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Half Term 5	**Bespoke Scheme of Work**	Content based on Question Level Analysis from Rehearsal Exam 2	Class specific based on QLA			

Key Assessments			
When	**What will be assessed?**	**Why is this being assessed?**	**How will results be stored & students receive feedback?**
HT1	Circles, Cylinders, Cones and Spheres Similarity and Congruence	To assess the students understanding of and their retention of the topics taught. This information will be used to inform the topics that make up the recall and retention starter activities to help aid student progression.	Scores will be stored on SIMS and student feedback will be through action feedback questions. Class based understanding will be monitored through a QLA to compare outcomes for classes.
HT2	Rehearsal Exam 1	To assess the students understanding of the topics taught which will inform the content that makes up the bespoke scheme of work for each class.	
HT3	Vectors Quadratic Equations and Graphs Rearranging Equations Simultaneous Equations	To assess the students understanding of the topics taught which will inform the content that makes up the bespoke scheme of work for each class.	
HT4	Rehearsal Exam 2	To assess the students understanding of the topics taught which will inform the content that makes up the bespoke scheme of work for each class.	