Our Lady Queen of Peace
Catholic High School

Curriculum Overview

Year 10 Maths (Foundation)

Careers		
Local Market Information	**Skills**	**Jobs**
Logistics and Warehousing, Manufacturing and Engineering, Construction, Healthcare and Care Sector	Communication, Teamwork, interpreting information, Logical reasoning, Accuracy, Financial literacy, Decision making	Statistician, Supply Chain Planner, Quality Inspector, Quantity Surveyor, Mechanical or Electrical Engineer, Journalist, Interior Design

	Knowledge & Understanding			**Subject Specific Literacy Development**	**Cultural Capital / Careers / Enrichment Opportunities**
	Topics (Bigger Picture)	**Knowledge (Key Concepts)**	**Recall & Retrieval Practice Focus**	**Key Vocabulary**	
Half Term 1	Algebra Foundations	Substitution, Simplifying, Expanding Single and Double Brackets, Solve Equations, Factorise, Change the Subject	Negative number calculations Factors and multiples	Expand, Simplify, Factorise, Rearrange, Subject, Solve, Linear Equation	Task Master - The great Paper Tower activity Builds problem solving and mathematical reasoning
	Fractions and Percentages of	Fractions of Amounts, Percentages of Amounts, Combinations of Fractions and Percentages	Function machine including inverse	Numerator, Denominator, proper fraction, mixed number, equivalent fractions	
	Ratio and proportion	Simplify and find equivalent ratios, share in a ratio given a total, one part, difference, expressing in the form 1:n, combining ratios, using the unitary method	Simplifying fractions, equivalent fractions Substitution	Ratio, part, whole, unit, simplify, equivalent, direct	
	Area	Finding area of squares, rectangles, parallelograms, triangles, trapeziums, compound shapes and circles	Multiplication methods(including decimals) Order of operations	Length, width, height, units, perpendicular, compound	
Half Term 2	Fractional Arithmetic	Add, subtract, multiply and divide fractions including mixed number fractions	Converting from improper fraction to mixed number and vice versa	Numerator, improper fraction, mixed number, simplify, common denominator	Task Master - Surface Area: Decorating a Room Design & Cost

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	Probability	Probability scales, finding simple probabilities, expected outcomes, sample space diagrams, tree diagrams and Venn diagrams to find probabilities.	Conversions between fractions, decimals and percentages. Algebra Foundations – Expanding Brackets	Outcome, event, sample space, experiment, relative frequency, certain, impossible, likely, tree diagram	
	Sequences	Describe and continue sequences, explore other types of sequences, generating sequences from a rule, find the nth term of a linear sequence	Algebra Foundations - Substitution	Sequence, term, pattern, rule, position, term number, nth term	
	Volume	Finding the volume of prisms, cylinders, spheres and cones. Find the surface area of cubes, cuboids and prisms	area of 2-D shapes nth term	Dimensions, units, measurements, capacity, net, cross section, face	
Half Term 3	Percentages	Find percentage of amounts, increase and decrease by an amount, expressing a number as a percentage of another, finding percentage change, working out simple and compound interest	Fractions of amounts Algebra foundations – change of subject	Multiplier, increase, decrease, change, original, profit, loss	Task Master - The Marble Run Task Measurement and time, Geometry and spatial thinking
	Vectors	Vector notation, multiplying vectors by scalers, perform calculations involving column vectors	Volume of prisms	Vector, scalar, movement, column, line segment	
Half Term 4	Accuracy	Decimal places, significant figures, estimation, using a calculator effectively, error intervals	Place value, ordering decimals	Approximation, exact, degree of accuracy, place value, integer, bounds	TaskMaster – Problems with Data Teamwork, Communication
	Pythagoras	Finding the hypotenuse, all lengths of a right angled triangle, Pythagoras in isosceles triangle and in real life	rounding to decimal/ significant figures Solve equations	Right angle, hypotenuse, squared, line segment, diagonal	
	Averages	Averages in discrete data, in a context, from ungrouped frequency tables, and grouped frequency tables	Area of 2D shapes	Mean, mode, median, range, compare, spread or variation, consistency,	
	Prime Factors	Finding multiples, factors ,primes and composites, expressing numbers as prime factors, solving problems involving prime factors	nth term	Prime number, composite number	

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Half Term 5	HCF/LCM	Finding HCF and LCM using Venn diagrams, using	Percentage change	Factor, multiple, prime factor, product	TaskMaster – Mystery Patterns (Teamwork, Communication)
	Angle Reasoning	Using angle facts : line point, opposites, Angles in triangles, quadrilaterals Angles in parallel lines Bearings Angles in polygons	Algebra foundations – expand double brackets Fraction arithmetic – addition and subtraction	Vertically opposite angles, equal angles, polygon, isosceles, equilateral, scalene, right angle, co-interior, supplementary, corresponding, interior, exterior	
	Compound Measures	Speed, Distance & Time Pressure, Force & Area Density, Volume & Mass Combining Mixtures	Converting metric units Rearranging formulae	Conversion, units, Pressure, Density, Per, Average Speed	
	Real life graphs	Read and interpret scales Use conversion graphs Predictions from conversion graphs	Averages from tables	Axes, axis, interval, gradient, constant, stationary, conversion graph, proportion	
	Representing Data	Construct and interpret: Bar charts Frequency polygons Pie Charts Scatter graphs Stem and leaf Pictograms	Pythagoras Reading scales	Bias, correlation, interpolation, interpret, outlier, accuracy	
Half Term 6	Transformations	Describe and perform: rotations, translations, enlargements, and reflections	Angle reasoning	Scale factor, congruent, invariant, object, image, (anti) clockwise	Task Master - The mass task Measurement and estimation, Problem-solving and reasoning

Key Assessments			
When	**What will be assessed?**	**Why is this being assessed?**	**How will results be stored & students receive feedback?**
October	Half Termly Topic Test on: Algebraic Foundations, Fractions and Percentages of, Ratio and proportion	Can students apply what they have learned to exam questions within time constraints	QLA on Pupil Progress Follow up activities for students to address gaps
December	Half Termly Topic Test on: Area, Fractions, Probability, Sequences		
January	Mid-Year Exam (Summative Assessment)	Check how well students can remember and apply what they know to a wide range of questions – can they identify the skills needed to answer questions including topics from KS3	QLA on Pupil Progress with strengths and areas for development given to students including follow up tasks
March	Half Termly Topic Test on: Volume, Percentages, Vectors,	Can students apply what they have learned to exam questions within time constraints	QLA on Pupil Progress Follow up activities for students to address gaps
May	Half Termly Topic Test on: HCF/LCM, Angle Reasoning, Compound Measures, Real life Graphs		
June	End of Year Exam (Summative Assessment)	Check how well students can remember and apply what they know to a wide range of questions – can they identify the skills needed to answer questions including topics from KS3	QLA on Pupil Progress with strengths and areas for development given to students including follow up tasks