YEAR 13 CURRICULUM INFORMATION - Mathematics		
	Spring 1	Spring 2
What will students be learning?	Statistics Unit 1 Regression, correlation and hypothesis testing Statistics unit 2 Conditional probability Mechanics unit 1 Moments Mechanics Unit 2 Forces and friction Mechanics unit 3 Projectiles	Statistics unit 3 The normal distribution Mechanics unit 4 Applications of forces Mechanics unit 5 Further kinematics
How will students be assessed?	Milestone assessment at the end of each unit.	Milestone assessment at the end of each unit
Literacy – What keywords will be taught?	Hypotheses, significance level, one-tailed test, two-tailed test, test statistic, null hypothesis, alternative hypothesis, critical value, critical region, acceptance region, p-value, binomial model, correlation coefficients, product moment correlation coefficient, population coefficient, sample, inference, mean, normal distribution, variance, assumed variance, linear regression, interpolation, extrapolation, coded data Sample space, exclusive event, complementary event, discrete random variable, continuous random variable, mathematical modelling, independent, mutually exclusive, Venn diagram, tree diagram, set notation, conditional probability, two-way tables, critiquing assumptions. Moment, turning effect, sense, newton metre (N m), equilibrium, reaction, tension, rod, uniform, non-uniform, centre of mass, resolve, tilting, 'on the point', concurrent. Force, weight, tension, thrust, friction, coefficient of friction, μ, limiting, reaction, resultant, magnitude, direction, bearing, force diagram, equilibrium, inextensible, light, negligible, particle, smooth, rough, uniform, perpendicular. Projectile, range, vertical, horizontal, component, acceleration, gravity, initial velocity, vector, angle of projection, position, trajectory, parabola.	Binomial, discrete distribution, discrete random variable, uniform, cumulative probabilities Normal, mean, variance, continuous distribution, histogram, inflection, appropriate probability distribution. Force, resultant, component, resolving, plane, parallel, perpendicular, weight, tension, thrust, friction, air resistance, reaction, driving force, braking force, force diagram, equilibrium, inextensible, light, negligible, particle, rough, smooth, incline, uniform, friction, coefficient of friction, concurrent, coplanar. Distance, displacement, speed, velocity, constant acceleration, constant force, variable force, variable acceleration, retardation, deceleration, initial (t = 0), stationary (speed = 0), at rest (speed = 0), instantaneously, differentiate, integrate, turning point.
What employability skills are being developed?	The specific value of maths as a required or preferred subject for particular careers e.g. • Engineers and engineering technicians	The specific value of maths as a required or preferred subject for particular careers e.g. • Engineers and engineering technicians

	• Surveyors and surveying technicians • Systems analysts • Actuaries • Accountants • Operational researchers • Chemists • Software engineers • Statisticians	• Surveyors and surveying technicians • Systems analysts • Actuaries • Accountants • Operational researchers • Chemists • Software engineers • Statisticians
Wider Curriculum Links?	**Physics** Trigonometry (sine waves) SUVAT Logarithms Exponentials Simultaneous equations **Chemistry** Graphs Quadratics Logarithms Rearranging formulae **Biology** Graphs Surface area and volume Logarithms **Business** Percentages Graphs **Psychology** Scatter graphs Venn diagrams	**Physics** Trigonometry (sine waves) SUVAT Logarithms Exponentials Simultaneous equations **Chemistry** Graphs Quadratics Logarithms Rearranging formulae **Biology** Graphs Surface area and volume Logarithms **Business** Percentages Graphs **Psychology** Scatter graphs Venn diagrams

	Box plots	Box plots
What useful websites are there for this topic?	www.mathsgenie.co.uk www.drfrost.co.uk www.resourceaholic.co.uk www.crashmaths.co.uk www.physicsandmathstutor.co.uk	www.mathsgenie.co.uk www.drfrost.co.uk www.resourceaholic.co.uk www.crashmaths.co.uk www.physicsandmathstutor.co.uk
What wider reading could be done for this topic?	**A-Level Maths Edexcel Complete Revision & Practice (with Online Edition & Video Solutions): for the 2024 and 2025 exams (CGP Edexcel A-Level Maths)**	**A-Level Maths Edexcel Complete Revision & Practice (with Online Edition & Video Solutions): for the 2024 and 2025 exams (CGP Edexcel A-Level Maths)**
What else can students be doing independently to develop their understanding of this topic?	Complete topic booklets from physicsandmathstutor.co.uk Complete exam packs to develop examination skills. Complete old specification past papers for extra practise.	Complete topic booklets from physicsandmathstutor.co.uk Complete exam packs to develop examination skills. Complete old specification past papers for extra practise.