Spring Term plan

Year 12 Mathematics A Level

Week	Mrs Laidler/Mr Bullock	Mrs Loveridge/Mr Ahluwalia
25/1	**Kinematics** Understand and use fundamental quantities and units in the SI system: length, time, mass. Understand and use derived quantities and units: velocity, acceleration, force, weight Understand and use the language of kinematics: position; displacement; distance travelled; velocity; speed; acceleration	**Data Presentation and Interpretation** Read discrete and continuous data from a variety of diagrams Summarise raw data
1/2	**Kinematics** Understand, use and interpret graphs in kinematics for motion in a straight line: displacement against time and interpretation of gradient; velocity against time and interpretation of gradient and area under the graph	**Probability** Use the vocabulary of probability theory, including the terms random experiment, sample space, independent events and mutually exclusive events Solve problems involving mutually exclusive and independent events using the addition and multiplication rules
8/2	**Kinematics** Understand, use and derive the formulae for constant acceleration for motion in a straight line	**Probability** Use a probability function or a given context to find the probability distribution and probabilities for particular events
15/2	Half Term	
22/2	**Kinematics** Use calculus in kinematics for motion in a straight line with variable acceleration.	**Probability** Recognise and solve problems relating to experiments which can be modelled by the Binomial distribution
1/3	**Forces and Newtons Laws** Understand the concept of a force; understand and use Newton's first law	**Probability** Binomial distribution and review
8/3	**Forces and Newtons Laws** Understand and use Newton's second law for motion in a straight line	**Hypothesis Testing** Understand and apply the language of statistical hypothesis testing, developed through a binomial model
15/3	**Forces and Newtons Laws** Understand and use weight and motion in a straight line under gravity	**Hypothesis Testing** Conduct a statistical hypothesis test for the proportion in the binomial distribution and interpret the results in context.
22/3	**Forces and Newtons Laws** Understand and use Newton's third law; equilibrium of forces on a particle and motion in a straight line	**Hypothesis Testing** Decide whether to reject or accept the null hypothesis and make conclusions
29/3	**Forces review**	**Hypothesis Testing Review**