Curriculum Map

Sandringham School
'Everybody can be Somebody'

Subject: **Mathematics** **Year group: Year 13**

This document maps the Year 13 Curriculum in Mathematics.

	Phase One ***September – November*** ***(13 weeks)***	**Phase Two** ***December – March*** ***(13 weeks)***	**Phase Three** ***April - June*** ***(9 weeks)***
Content ***Declarative Knowledge – 'Know What'***	***INTENT**: Students consolidate their learning of the A2 Pure topics from the end of Year 12 and continue to learn new Pure Mathematics content.* **Pure Mathematics** Reciprocal Trigonometric Functions Further Trigonometric Identities Further Differentiation Further Integration **Mechanics** Moments Forces and friction Projectiles **Statistics** Non-linear Regression, Correlation and Hypothesis Testing Conditional Probability The Normal Distribution	***INTENT:** Students continue to learn new content and complete the A2 Scheme of Work in both Pure Mathematics and Statistics and Mechanics.* **Pure Mathematics** Numerical methods (Newton Rhapson /Trapezium rule) Parametric Equations Functions and combined graph transformations Proof Modelling (Trigonometry, Differentiation, Integration, Parametrics, series) **Mechanics** Application of forces Further kinematics	***INTENT:** Students complete a 5-week revision programme before exams/study leave begin.* The five-week revision programme is bespoke to each teaching group. The focus will be on completing past exam papers and practice papers in both Pure Mathematics and Statistics and Mechanics.
Skills ***Procedural Knowledge – 'Know How'***	Learn to select appropriate knowledge and methodology to new algebra and geometry concepts and apply them in a range of modelling problems in different contexts. Learn to select appropriate knowledge and methodology to the new concept of moments and friction. Recognise the limitations of the	Learn to select appropriate knowledge and methodology to new number, algebra and geometry concepts and apply them in a range of modelling problems in different contexts. Learn to select appropriate statistical notation and interpret statistical answers in the context of a variety of problems including the Edexcel large data set.	Review topics to consolidate mathematical understanding and how to apply this knowledge appropriately in the context of the exam.

	models used to answer a variety of problems in context. Learn to select appropriate statistical notation and interpret statistical answers in the context of a variety of problems including the Edexcel large data set.	Learn to select appropriate knowledge and methodology to the extended concepts of projectiles, friction and non-constant acceleration. Recognise the limitations of the models used to answer a variety of problems in context.	
Key Questions			
Assessment	Applied test 1(Moments and Normal distribution) Pure test 1 (Trigonometry and differentiation) Applied test 2 (Forces, friction, projectiles, probability)	**Trial Exams** Pure Mathematics 2 hours (AS and A2 questions covered in Phase 1 and December of Phase 2) Statistics and Mechanics (AS and A2 questions on Statistics and Mechanics covered in Phase 1 and by December in Phase 2)	**Final A2 Exams** Students sit three A2 papers on dates as prescribed by exam boards. Pure Mathematics Paper 1 (2 hours) Pure Mathematics Paper 2 (2 hours) Statistics and Mechanics Paper 3(2 hours)
Literacy/Numeracy/ SMSC/Character	Understanding and interpreting calculations used in mathematical modelling problems set in real-life contexts. Carrying out algebraic proofs of mathematical identities or formulae used in solving problems. Aspiration, Resilience, Initiative, Confidence	Understanding and interpreting calculations used in mathematical modelling problems set in real-life contexts. Carrying out algebraic proofs of mathematical identities or formulae used in solving problems. Aspiration, Resilience, Initiative, Confidence	Understanding and interpreting calculations used in mathematical modelling problems set in real-life contexts. Carrying out algebraic proofs of mathematical identities or formulae used in solving problems. Aspiration, Resilience, Initiative, Confidence