MOOR PARK HIGH SCHOOL: CURRICULUM

Key Stage 4 Long Term Planning
Year 11 SYLLABUS: AQA GCSE Mathematics 8300

Curriculum Area: Mathematics (Accelerated)

(Please note that knowledege, related skills and connections to previous learning are linked by colour coding)

Year 11	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1
Knowledge	Vectors Equation of a circle Functions, composite and inverse Further sketching graphs	Transforming functions Recap sine and cosine rule Quadratic inequalities Circle theorems	Numerical methods Growth and Decay	Gradients and rate of change Pre calculus and area under a curve	Revise
Skills	Apply addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representation of vectors. Use vectors to construct geometric arguments and proofs. Recognise and use the equation of a circle with centre at the origin. Find the equation of a tangent to a circle at a given point. Where appropriate, interpret simple expressions as functions with inputs and outputs. Interpret the reverse process as the 'inverse function'. Interpret the succession of two functions as a 'composite function Recognise, sketch and interpret graphs of linear functions, quadratic functions, simple cubic functions and the reciprocal graphs	Sketch translations and reflections of a given function Know and apply the sine rule and cosine rule to find unknown lengths and angles. Know and apply ½ absinc to calculate the area, sides or angles of any triangles Solve quadratic inequalities Apply and prove the standard circle theorems concerning angles, radii, tangents and chords and use them to prove related results	Find approximate solutions to equations numerically using iteration Set up, solve and interpret the answers in growth and decay problems, including compound interest and work with general iterative processes	Interpret the gradient at a point on a curve as the instantaneous rate of change. Apply the concepts of average and instantaneous rates of change. Interpret the gradient of a straight-line graph as a rate of change Calculate or estimate gradients of graphs and areas under graphs (including quadratic and other non-linear graphs). Interpret the results in cases such as distance-time graphs, velocity-time graphs and graphs in financial contexts	
Connection to previous learning	Year 9 Summer Term 2 Transformations Year 9 Autumn Term 2 Coordinates and linear graphs Year 10 Spring Term 1 Further equations and graphs Year 9 Summer Term 2 Transformations	Year 10 Spring Term 2 Sine and cosine rule Year 10 Autumn Term 2 Linear inequalities Year 10 Summer Term 2 Geometry	Year 10 Spring Term 1 Further equations and graphs Year 9 Autumn Term 1 Calculating with percentages	Year 9 Autumn Term 2 Coordinates and linear graphs Year 9 Spring Term 1 Measures	

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Assessment	*Skills check at the end of each unit (4 during this term)*	*Skills check at the end of each unit (4 during this term)* *Mock 1 CAP1*	*Skills check at the end of each unit (2 during this term)*	*Skills check at the end of each unit (2 during this term)* *Mock 2 CAP2*	*GCSE Examinations*
Homework	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision plan	Revision plan
Literacy	Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions	Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions	Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions	Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions	Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions
CIAG	Data Analysts - https://www.youtube.com/watch?v=yqyIYh4bKKo	Software Engineer - https://youtu.be/Q9tUUP-phCw	Film Maker - https://www.youtube.com/watch?v=C7tQW5ieGHg	Climate Scientist - https://youtu.be/HZND8Fas8Uw Mathematics KS5 taster sessions	