Chesterton Community Sports College

Curriculum Intent

Subject: Mathematics
Year 10

	Topics	Why?	National Curriculum Links
Term 1-1	Exam recap	- By consolidating and revisiting content from Year 9, the year group are fully prepared for the Year 10 Exam Week at the end of the first half term. Students following the GCSE Higher course sit a full GCSE past paper in order to accurately assess their current working grade.	
Term 1-2	Measures and circle geometry Algebraic manipulation and quadratics	- Circle Theorems build on Geometry and Measures work from Year 9, introducing new angle facts relating to circle geometry. Circle Theorems involving right angles builds into the Pythagoras' and Trigonometry units later in the year. - Students are introduced to higher algebra skills – building on Year 9 manipulation. Students practice forming expressions and equations, a topic that is revisited in more depth later in the yaer. Year 10 are required to add an algebraic problem solving element to a number of previously taught topics.	• Completing the square • Circle geometry • Algebra manipulation • Similar shapes
Term 2-1	Fractions decimals and percentages Angles and vectors Graphs	- Functions and Vectors are taught after KS4 have had adequate teaching in Algebra to access key GCSE units. Functions and Vectors are also supported by previously taught units, Sequenes and Pythagoras and Trigonometry respectively. - Graphs finalises the understanding of Graphs for GCSE students as a direct continuation of the Graphs unit from earlier in the course.	• Transforming graphs • Area under graphs • Rates of change
Term 2-2	Statistics Transformations and bearings Solving equations	- As a stand alone topic, Statistical Diagrams is taught in Year 10. - Transformations is taught as a broader topic, encompassing transformations as graphs, having studied graphs in the last term. - The algebra work from earlier in the year is built upon, moving on the solving the previously formed equations.	• Vectors • Combinations of transformations • Negative and fractional enlargements
Term 3-1	Powers and roots Construction and Pythagoras Sequences	- Higher GCSE students are expected to find the nth term of quadratic and geometric terms. Students build on knowledge from KS3 and revisited in Year 9. Introducing quadratic sequences prepares students for the Graphs 1 unit taught later.	• 3D Pythagoras • Quadratic sequences • Fibonacci sequences
Term 3-2	3D Shapes and trigonometry Ratio and proportion	- Further Trigonometry builds on key learning from the Pythagoras and Trigonometry unit from earlier in the year. As a key topic of the GCSE course, Further Trigonometry is taught close to the end of the year, just before end of year exams. - Ratio and Proportion is now taught as a stand alone topic from the GCSE course, and has applications throughout the rest of the GCSE course. As a result it is taught as its own unit during all 3 years of the GCSE course. - The year group then enters a period of revision and recap before completing end of year exams.	• Histograms • Sine and cosine rule • Exact trig values • Direct and indirect proportion • Cumulative frequency • Box plots • 3D trigonometry