Curriculum Knowledge Map 2023-24

Year 11	AUTUMN –
	Year 11 will work on many topics and skills over the term including those detailed below. The Schemes of work are very fluid in Year 11 and staff use exam papers, question level analysis to target topics that are most beneficial for students and groups of students. Each 'tier' of Maths group will aim to complete the majority of the topics below. Sparx homework will bespoke and will address gaps in knowledge.

	Higher Tier	Foundation Tier
Declarative **Procedural** **Assessment** Year 11 will have a baseline exam in Week 3 of Autumn term, informal exams every 2 weeks in lesson and will complete 3 formal exams as part of College Entry Exams	Ratio Angles in Polygons Speed/distance/time Frequency Tables - Mean/estimated mean Compound Measures Compound Interest Fractional and negative indices Recurring fractions Boxplots Cumulative Frequency Product rule Solving equations and inequalities Changing the subject Upper and lower bounds Angles in parallel lines Compound Measures/Crossover Angles in polygons Surds including rationalising expanding and factorising. Reverse Mean Scatter graphs Sequences (including quadratics) Frequency Polygons Coordinate geometry Straight Line Graphs Surface area and volume - cylinders, cones, spheres and frustums y=mx + c Transformations Parallel and Perpendicular lines Quadratics expanding and simplifying. Using graphs of circles, cubes and quadratics Tree Diagrams Conditional probability Compound Interest Direct and inverse proportion Depreciation and Decay	Inequalities Squares and Cubes/Roots Forming expressions Equations, expressions, Identities Collecting Terms Simplifying algebraic expressions Substitution into formulae Find a percentage of an amount (non-calc) Find a percentage of an amount (calc) Percentage Increase/decrease Use percentages to solve problems, including the comparison of quantities using percentages. 2D Shapes Identify and classify quadrilaterals. Two Way Tables Frequency Trees Venn Diagrams Product of primes Worded HCF/LCM Best Value Exchange Rates Rounding /Estimation Error Intervals Interest and Growth Depreciation and Decay Reverse Percentages Fractions Ratio Proportion - Recipes Standard Index Form Index Laws Expand and Simplify Factorising Solving equations Subject of formula Averages Averages from a Table

Curriculum Knowledge Map 2023-24

Year 11	SPRING – Year 11 will cover multiple topics including some detailed below. They will use feedback from their Mock Exams to identify areas for development and teachers will plan personalised lessons to support. Students will complete at least one exam paper in class per week and one each week for homework. Sparx homework will be bespoke and will address gaps in knowledge	
	Higher Tier	**Foundation Tier**
Declarative **Procedural** **Assessment** Year 11 will have a baseline exam in Week 3 of Autumn term, informal exams every 2 weeks in lesson and will complete 3 formal exams as part of College Entry Exams.	Standard Form - all encompassing Trig - finding angles. Trig - finding sides. Pythagoras and Trig Bearings Exact Values Arcs and Sectors Surface Area Volume Transformations Vectors Quadratic Sequences Forming and solving Forming and solving with geometry Simultaneous Equations Proportional reasoning Direct/Inverse Proportion Histograms Quadratics including the formula and iteration. Simultaneous equations Using graphs of circles, cubes and quadratics Conditional probability Direct and inverse proportion Similarity in 2D and 3D Graphs of trig functions Further trigonometry Sampling Cumulative frequency and box plots Histograms	Inequalities Frequency Diagrams Scatter Graphs Time Series Straight Line Graphs Quadratic and Cubic Graphs Coordinate Geometry Speed, Distance, Time Compound Measures Real Life Graphs Pythagoras Trig - Non Calculator Trig - Finding Sides Trig - Finding Angles Pythagoras with Trig Bearings Alternate/Corresponding Angles Interior and Exterior Angles Sampling Pie Charts Probability Probability Trees Plans and Elevations Constructions Circles Arcs and Sectors Surface Area and Volume Congruence Similar Shapes Enlargements Reflections Rotations Reflections with Rotations Translations Vectors Sequences Forming and Solving Equations Simultaneous Equations Direct Proportion and Inverse Proportion

Curriculum Knowledge Map 2023-24

Year 11	**SUMMER** Year 11 will use Question Level Analysis from College Entry and Mock Exams to identify areas of strength and weakness and deliver bespoke lessons. Students will complete at least one past paper per week in lesson and one for homework to help prepare for the GCSE exam.	
Topic		
Declarative *What should they know? What key facts/concepts/knowledge do we want all students to know?*		
Procedural *What should they be able to do? What things should all students be able to do?*		
Assessment		