Subject area: Mathematics Year 10 Higher

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Investigating Properties of Shapes Calculating Solving Equations and Inequalities 1	Mathematical Movement 1 Algebraic Proficiency: tinkering Proportional Reasoning	Pattern Sniffing Solving Equations and Inequalities 2 Calculating Space	Conjecturing Algebraic Proficiency: visualising 1 Exploring Fractions, Decimals and Percentages	Solving Equations and Inequalities 3 Understanding Risk Analysing Statistics	Algebraic Proficiency: visualising 2 Mathematical Movement 2 Visualising and Constructing
Assessment	Year 10 Test 1 Sparx Homeworks Mini-Tests	Year 10 Test 2 Sparx Homeworks Mini-Tests	Year 10 Test 3 Sparx Homeworks Mini-Tests	Year 10 Test 4 Sparx Homeworks Mini-Tests	Sparx Homeworks Mini-Tests	Mock Exams (Calc & Non-Calc) Sparx Homeworks Mini-Tests
H/W	Half Exam Papers Sparx Maths	Half Exam Papers Sparx Maths	Half Exam Papers Sparx Maths	Half Exam Papers Sparx Maths	Half Exam Papers Sparx Maths	Half Exam Papers Sparx Maths
Literacy Task	***Famous Mathematicians***	***Engineering***	***Astronomy***	***Sport***	***Art***	

Literacy	Use of Tier 3 vocabulary in lessons Mini-tests focussing on knowledge and literacy Literacy maths challenge in Spring term Half termly Cross Curricular Literacy
Building on prior learning	Key points for the year will include: • Manipulate fractional indices • Solve problems involving direct and inverse proportion • Convert between recurring decimals and fractions • Solve equations using iterative methods •Manipulate algebraic expressions by factorising a quadratic expression of the form $ax^2 + bx + c$ • Solve quadratic equations by factorising • Link graphs of quadratic functions to related equations • Interpret a gradient as a rate of change • Recognise and use the equation of a circle with centre at the origin • Apply trigonometry in two dimensions • Calculate volumes of spheres, cones and pyramids • Understand and use vectors • Analyse data through measures of central tendency, including quartiles
Enrichment within the Curriculum	National Mathematics Challenge for students who show very good problem solving skills. Maths Challenges and House Competitions Sparx Leader Board
Extracurricular opportunities	Lunchtime support offered where students require extra help. Beat the teacher maths clubs. KS4 Maths clubs
Positive impacting on personal development (SMSC)	In Maths lessons students are always encouraged to portray British Values. They are also encouraged to delve deeper into their understanding of Mathematics and how it relates to the world around them. Problem solving skills and teamwork are fundamental to Mathematics, through creative thinking, discussion, explaining and presenting ideas. Students are always encouraged to develop their Mathematical reasoning skills, communicating with others and explaining concepts to each other. Self and peer reviewing are very important to enable students to have an accurate grasp of where they are and how they need to improve.
Preparing for the next stage of education	Development of topics in the areas of Number, Ratio and Proportion, Algebra, Geometry and Statistics

Ways to support your child's learning	Check student planner / Inspire for Maths homework and support them with this. Access to commercial websites, have many resources and videos for you to help support your child's learning and revision for assessments. Numeracy can be developed adding totals during a supermarket shop, working with percentages in shop sales etc. **Useful Websites:** **Sparx Maths-** https://www.sparxmaths.uk/ **Corbettmaths-** www.corbettmaths.com **Mymaths-** https://www.mymaths.co.uk/ **BBC Bitesize-** https://www.bbc.co.uk/bitesize/examspecs/z9p3mnb **Mathsgenie-** https://www.mathsgenie.co.uk/gcse.html **Mathsbot-** https://mathsbot.com/ **Maths Made Easy-** https://mathsmadeeasy.co.uk/ **On Maths-** https://www.onmaths.com/ **Exam Solutions-** https://www.examsolutions.net/gcse-maths/ **Study Maths-** https://studymaths.co.uk/
Response to COVID	Targetted starters to address gaps in knowledge Sparx homework based on gaps in knowledge
Cross Curricular Links	Half termly cross curriucular homework in Sport, History, Astrology, Engineering and Art. Geography – Percentage of an amount, reading bars charts, the averages, coordinates, percentage change Science - Percentage of an amount, percentage change, reading bars charts, constructing bar charts,the averages, converting units, data collection tables, SDT, FPA, DMV, Standard Form, Pythagoras DT – Converting units, using rulers and protractors, finding missing angles, area and perimeter, Pythagoras MFL – Etymology of words History – Pythagoras

Assessment Tracking

Test	Date	Percentage
Year 10 Test 1		
Year 10 Test 2		
Year 10 Test 3		
Year 10 Test 4		
Year 10 Mock Exam Paper 1 (Non-Calculator)		
Year 10 Mock Exam Paper 2 (Calculator)		