Wesgreen International School | Inspiring Excellence, Empowering Global Minds

Programme of Study – Year 10 Subject: Mathematics

	Theme	Overview of key learning to take place	How learning will be assessed
Term 1	Unit 1 and 2:	**Chapter 1: Number 1** 1.1 I can add, subtract, multiply and divide fractions. 1.2 I can evaluate numerical expressions using BIDMAS 1.3 I can round numbers to nearest decimal places and significant figures. **Chapter 2: Algebra 1** 2.1 I can expand and evaluate algebraic expressions by combining like terms. 2.2 I can solve linear equations. 2.3 I can analyse and solve problems leading to equations **Chapter 3: Graph 1** 3.1 I can find the gradient of a line through two points. 3.2 I can draw and interpret real life graphs. 3.3 I can plot graphs of straight lines with equations ax + by =c. 3.4 I can use straight line graphs to convert units. **Chapter 4: Shape and space 1** 4.1 I can use fundamental geometrical properties to find the unknown. 4.2 I can use and interpret maps and scale drawings. 4.3 I can construct triangles and perpendicular bisector using a ruler and compasses. 4.3 I can solve problems on similar shapes **Chapter 5: Sets** 5.1 I can use set notation Venn diagrams to represent the sets. **Chapter 1: Number 2** 1.1 I can write the numbers in standard form. 1.2 I can calculate percentage increase and decrease. **Chapter 2: Algebra 2** 2.1 I can solve problems related to algebraic fractions. 2.2 I can solve equations with roots and powers. 2.3 I can solve inequalities and show solution on a number line. **Chapter 3: Graph 2** 3.1 I can find equation of line.	**Formative Assessment:** There will be 2 Formative Assessments per term. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work. Examples of Formative Assessment to be used this term: • Homework/Notebook work • Short quiz - Past papers/textbook questions **Summative Assessments:** These will take place at the end of each unit studied in the Term. There will be a minimum of 2 End of Unit Assessments per Term. Students will receive a mark for each assessment and personalised next steps for improvement.

		3.2 I can sketch graphs using the gradient and intercepts. 3.3 I can solve pair of simultaneous equations. **Chapter 4: Shape and space 2** 4.1 I can solve problems using Pythagoras Theorem. 4.2 I can understand and apply circle theorems to solve problems. **Chapter 5: Data Handling 1** 5.1 I can represent and interpret the data. 5.2 I can decide which average is best for a set of data.	
Term 2	Unit 3, 4 and 5 :	**Chapter 1: Number 3** 1.1 I can find HCF and LCM of two or more numbers. 1.2 I can compare ratios **Chapter 2: Algebra 3** 1.1 I can factorise algebraic expressions. 1.2 I can solve equations with fractions. 1.3 I can solve simultaneous equations. **Chapter 3: Graph 3** 3.1 I can draw and interpret distance –time graphs. 3.2 I can draw and interpret speed-time graphs. **Chapter 4: Shape and space 3** 4.1 I can use tangent ratio to find the missing length and angles of right angled triangle **Chapter 5: Data Handling 2** 5.1 I can estimate the mean, median, mode and range from a grouped frequency table **Chapter 1: Number 4** 1.1 I can calculate compound percentages. 1.2 I can find inverse percentages. **Chapter 2: Algebra 4** 2.1 I can substitute numbers into formulae. 2.2 I can change the subject of a formula. **Chapter 3: Graph 4** I can draw quadratic graphs and use graphs to solve the quadratic equations	**Formative Assessment:** There will be 2 Formative Assessments per term. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work. **Examples of Formative Assessment to be used this term:** • Homework/Notebook work • Short quiz - Past papers/textbook questions **Summative Assessments:** These will take place at the end of each unit studied in the Term. There will be a minimum of 2 End of Unit Assessments per Term. Students will receive a mark for each assessment and personalised next steps for improvement

		Chapter 4: Shape and space 4 4.1 I can use the trigonometric ratios to find a length and an angle in a right angled triangle. **Chapter 5: Data Handling 3** 5.1 I can find the inter-quartile range of discrete data. 5.2 I can cumulative frequency graph to find inter-quartile range. **Chapter 1: Number 5** 1.1 I can use a calculator and estimate the solution. 1.2 I can solve problems using upper and lower bounds where values are given to a degree of accuracy **Chapter 1: Algebra 5** 2.1 I can expand the product of two or more linear expressions. 2.2 I can solve problems involving quadratic equations.	
Term 3	Unit 5 and 6 :	**Chapter 3: Graph 5** 3.1 I can represent and interpret simple linear inequalities on rectangular Cartesian graphs. 3.2 I can find the equations of lines perpendicular to a given line. 3.3 I can find the coordinates of the mid-point and length of a line. **Chapter 4: Shape and space 5** 4.1 I can explain translations, reflections, rotations and enlargements. 4.2 I can describe combined transformations. **Chapter 5: Data Handling 4** 5.1 I can understand and explain basic ideas of probability. **Chapter 1: Number 6** 1.1 I can recognise and solve problems on direct and inverse proportions. 1.2 I can apply index laws to simplify numerical expressions. **Chapter 2: Algebra 6** 2.1 I can write and use formulae to solve problems involving direct proportion 2.2 I can write and use formulae to solve problems involving inverse proportion 2.3 I can use index notation involving fractional, negative and zero powers. **Chapter 3: Sequences**	**Formative Assessment:** There will be 2 Formative Assessments per term. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work. • Homework/Notebook work • Short quiz - Past papers/textbook questions **Summative Assessments:** These will take place at the end of each unit studied in the Term. There will be a minimum of 2 End of Unit Assessments per Term. End of Term assessment Unit 1 -5 - TBC

		3.1 I can find n^{th} term of a sequence. 3.2 I can solve problems based on arithmetic sequence. 3.2 I can find the sum of the first n terms of an arithmetic series.	Students will receive a mark for end of topic assessment and personalised next steps for improvement.
Term 3	**Revision and End of Term Assessments**	**Content to be revised in preparation for End of Term Assessment – All chapters covered in Y 10**	**Style of the assessment- TBC**