Year 11 Maths Foundation Course Outline

		Students have 4 lessons per fortnight Homework is set 2 times a fortnight		
	Topic and approximate duration	**Key Learning Areas**		**Homework Options** Students will be guided by the class teacher as to which level to complete (according to target level)
Autumn First Half Term	**Congruence, Similarity and Vectors**	Students should be able to: Enlarge simple shapes by a scale factor; understand similarity Know definition for similar shapes, the same; find the scale factor of an enlargement; use similarity to find missing lengths; calculate perimeters of similar shapes; recognise congruent shapes; use congruence to; use congruence to work out unknown sides; translation by a column vector; add vectors; find the resultant of two vectors.		Practice book chapter 19 • Similar shapes • Add vectors • Recognise and use congruence • Exam questions (assessed)
	More Algebra	Students should be able to: Collecting like terms; substituting values into expressions; draw and interpret graphs of cubic functions; draw and interpret the graph of y = 1/x; solve cubic functions using their graphs.; draw and interpret non-linear graphs to solve problems; plot linear graphs; to be able to solve simultaneous equations by using a graph; write and solve simultaneous equations; form simultaneous equations from worded problems which need to be solved graphically; solve linear equations; solve simultaneous equations algebraically; change the subject of the formula; change the subject where the subject is repeated; factorise expressions; identify expressions, equations, identities and formulae.		Practice book chapter 20 • Change the subject of formulae • Draw cubic and reciprocal graphs • Solve simultaneous equations graphically and algebraically • Exam questions (assessed) •)
	Nature of Landmark Assessment	Past paper taken at the end of September and October.		

	Topic and approximate duration	Key Learning Areas	Homework Options Students will be guided by the class teacher as to which level to complete (according to target level)
Autumn Second Half Term	**Fractions, Indices and Standard From**	Students should be able to: Converting between top heavy fractions and mixed numbers; multiply and divide mixed numbers and fraction; solve fractions questions in context; find reciprocals of decimals and mixed numbers; to know and use the laws of indices; write reciprocals in index form; use a calculator to find the values of number in index form; write large numbers in standard form; write small numbers in standard form.	Practice book chapter 18 • Standard form • Exam questions (assessed)
	Mock examinations	Students should spend two weeks preparing for mock examinations.	2 Past examination Papers
	Nature of Landmark Assessment	Mock examination.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Spring First Half Term	**Revision**	Equations, inequalities and sequences Angles Perimeter area and volume ½ Graphs Transformations Right angled triangles	Variety of revision material set
	Nature of Landmark Assessment	Past paper taken at the end of January.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Spring Second Half Term	**Revision**	Probability Multiplicative reasoning Problem solving questions Number/Algebra Graphs, tables and charts/ Averages and range	Variety of revision material set
	Nature of Landmark Assessment	Past paper taken at the end of February and March.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Summer First Half Term	**Revision**	Students will Complete a variety of past examination papers and use analysis to direct topic revision to group and individual tasks.	2 Past Papers Variety of revision material set
	Nature of Landmark Assessment	Past paper taken at the end of April and May. 2 Mock examinations taken during lessons.	

Year 11 Maths Higher Course Outline

		Students have 8 lessons per fortnight Homework is set 4 times a fortnight mainly from student practice book to be found on Firefly.	
	Topic and approximate duration	**Key Learning Areas**	**Homework Options** **Students will be guided by the class teacher as to which level to complete (according to target level)**
Autumn First Half Term	**Proportion and Graphs**	Students should be able to: Write and use equations to solve problems involving direct proportion; identify graphs of direct proportionality; solve problems involving square and cubic proportionality; form equations from proportionality statements; write and use equations to solve problems involving inverse proportion and to use and recognise its graph; recognise graphs of exponential functions and to sketch graphs of exponential functions; find the gradient; identify tangents; calculate the gradients of a tangent and to estimate the area under a non-linear graph; understand the relationship between translating a graph and the change in its function notation; understand the effect of stretching a curve parallel to one of the axis has on its functions form; translate and stretching functions; understand the effect reflecting a curve in one of the axis has on its function form.	Higher practice book Chapter 19 • Form equations from proportionality statements • Transformations of functions • Exam questions (assessed)
	Vectors and Geometric proof	Students should be able to: Understand and use vector notation, including column notation, and understand and interpret vectors as displacement in the plane with an associated direction; understand that 2a is parallel to a and twice its length, and that a is parallel to –a in the opposite direction; represent vectors, combinations of vectors and scalar multiples in the plane pictorially; calculate the sum of two vectors, the difference of two vectors and a scalar multiple of a vector using column vectors; multiplying vectors (including algebraic terms); produced geometrical proofs to prove points are collinear and vectors/lines are parallel; find the length of a vector using Pythagoras' Theorem; calculate the resultant of two vectors; solve geometric problems in 2D where vectors are divided in a given ratio.	Higher practice book Chapter 18 • Calculating resultant vectors • magnitudes of vectors • Exam questions (assessed))
	Nature of Landmark Assessment	Past paper taken at the end of September and October.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Autumn Second Half Term	Revision	Interpreting and representing data Fractions ratio and percentages Angles and trigonometry Area and volume Equations and inequalities	A variety of past examination questions set once a week.
	Mock examinations	Students should spend two weeks preparing for mock examinations.	2 Past examination Papers
	Nature of Landmark Assessment	Mock examination.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Spring First Half Term	**Revision**	Multiplicative reasoning Probability Similarity and congruence More trigonometry Further statistics Equations and graphs Circle theorems	A variety of past examination questions set once a week.
	Nature of Landmark Assessment	Past paper taken at the end of January.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Spring Second Half Term	**Revision**	More algebra Vectors and geometric proof.	A variety of past examination questions set once a week.
	Nature of Landmark Assessment	Past paper taken at the end of February and March.	

	Topic and approximate duration	Key Learning Areas	Homework Options **Students will be guided by the class teacher as to which level to complete (according to target level)**
Summer First Half Term	**Revision**	Students will Complete a variety of past examination papers and use analysis to direct topic revision to group and individual tasks.	2 Past Papers Variety of revision material set
	Nature of Landmark Assessment	Past paper taken at the end of April and May. 2 Mock examinations taken during lessons.	