Cover Page		SoW Overviews		*** Timings will change Y11 completed by end of Spring 1	

		YEAR 7	Explicit in all areas of curriculum D1 D2 D3 D7 R1 R6 So1 So2 So3 So4		

AUTUMN 1 - Algebraic Thinking

		Exploring Sequences	Understanding and using algebraic notations	Equality and equivalence
NC Codes		D6 R3 R4 N15 A15 A17 A18 A19 A22	D4. D5 R3 N5 N15 A1 A2 A3 A4 A5 A6 A7	D4 R3 R4 N6 N15 A9 A16
Rationale		Introductory unit designed to be accessed by all, calculators are used to suppport conceptual understanding and develop their efficient use by all. Many ideas explored in this unit will be novel; starting with this unit will hook the students. Exploring sequences helps pattern spotting and problem solving. The introduction of correct algebraic notation will support its application in forthcoming units.		

AUTUMN 2 - Place Value and Equivalence

		Place value and ordering integers and decimals	Fraction, decimal and percentage equivalence
NC Codes		N1 N2 N8(H) N13 N14 S1	D4 D5 N9 N10 N11 N12 N15
Rationale		This is a revisitation of key topics covered in primary and designed to close the gaps and develop a deeper understanding of key mathematical concepts and application to a variety of problems. Connections are made by teaching range and median when teaching ordering numbers. Where possible, connections are made to real life problems. Topics such as rounding and standard form are introduced to allow them to be used in other subjects, e.g. science, and also reinforces caculator use. The unit is designed to give students a sense of numerocity for large numbers and numbers smaller than 1.	

SPRING 1 - Application of Number

		Solving problems with additions and subtraction	Solving problems with multiplication and division	Fractions and percentages of amounts
NC Codes		N4 N6 N12 RP1 G1 G2 S1	N3 N4 N6 N12 RP1 G1 G2 S1	D5 N4 N9 N10 N12 RP3 RP8
Rationale		All further mathematical concepts are based on the 4 operations. Focussing on the rules of arithmetic to improve students ability to apply these to algebra and problem solving questions.once again, closing gaps from primary. Also students have the oppurrunity to choose between formal/mental methods. It reinforces concepts from previous units, eg fractions of amounts. Links are made between real life situations such as perimeter and area. The unit increases the breadth of understanding and improves mathematical literacy of students, decision making skills are developed here.		

SPRING 2 - DIrected Numbers and Fractional Thinking

		Operations and equations with directed numbers		Addition and subtraction of fractions
NC Codes		D4 D5 R3 N2 N5 A11 A16		D5 N9 N11
Rationale		Applying knoweldge and skills from Spring 1, using directed numbers and fractions. Enables students to further explore the real		

SUMMER 1 - Lines and Angles

		Constructing, measuring and using geometric notation		Developing geometric reasoning
NC Codes		R5 N12 RP2 G1 G3 G4 G5 G6 G7		D4 R5 N12 G10 G11(H) G12 G16
Rationale		We are building on primary school knowledge but including the development of the use of mathematical instruments. We want to		

SUMMER 2 - Reasoning and Number

		Developing number sense	Sets and probability	Prime number and proof
NC Codes		D4 D5 N3 N7 N14	R7 N16 P1 P2 P3	D4 D5 R4 N3 N7 N16
Rationale		Further developing mental arithmetic stategies and understanding the importance of not assuming things are/are not true. It builds		

		YEAR 8	Explicit in all areas of curriculum D1 D2 D3 D7 R1 R6 So1 So2 So3 So4			

		AUTUMN 1 - Proportional Reasoning				
		Ratio and scale		Multiplicative change		Multiplying and (
	NC Codes	R6 N3 N9 N11 N12 N15 RP1 RP2 RP3 RP4 RP5 RP6 RP7 RP9 G1 G2 G3				
		Allowing students to apply their prior knowledge of the 4 operations and fractions, students will be afforded the these skills in developing a deeper understanding of their own place in the world, through well considered scen students to apply ratio, multiplicative change and multiplying and dviding fractions. This will prepare studnets t they will encounter later in life, particularly within the STEM industries				

		AUTUMN 2 - Representing data				
		Working in the Cartesian plane		Representing data		
	NC Codes	A18 A17 A19 A20 A22		D7 R7 S2 S1 S3		
		We want students who are able to collate, represent and interpret data, to spot trends. This will support their a well researched argument, based on trends developed from their ability to collate, represent and interpret data Autumn 2, students will develop a variety of skills which use graphs and tables, and will practice the use of thes being able to argue a well researched point of view.				

		SPRING 1 - Algebraic techniques				
		Brackets, equations and inequalities		Sequences		
	NC Codes	N4 N6 N7 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A15 A16 A23 A24 A25				
		Throughout their studies, students will be expected to form and solve equations, when calculating an unknow this half term, studnets will be afforded the opportunity to develop the algebraic skills required to calulate an Throughout their lifes, studnets will find themselves in situations where they are required to calculate unknow prepares them for this.				

		SPRING 2 - Developing Number				
		Fractions and percentages		Standard index form		
	NC Codes	N3 N4 N7 N9 N10 N11 RP3 RP8		N8 N7 N15		
		Within the STEM sector, the use of very large and very small units of measurements are required, which requir				

		SUMMER 1 - Lines and Angles				
		Constructing, measuring and using geometric notation		Developing geometric reas		
	NC Codes	R5 N12 N13 N14 G3 G4 G5 G6 G7		N15 N12 RP2 G1 G2 G8 G10 G11 G12 G16		
		Many of the careers which students are being prepared for have a requirement to use fine motor skills, includir				

		SUMMER 2 - Reasoning with Data				
		The data handling cycle		Measures a		
	NC Codes	D7 R7 S1 S2 S3		S1		
		Throughout Summer 2, students will further develop their prior knowledge of data representation to develop r				

				YEAR 9 - HIGHER	Explicit in all areas
				AUTUMN 1 - A	
dividing fractions				**Straight Line Graphs**	
			NC Codes	A5, A10, A18 A19 (linear), D8 A21	
e opportunity to apply arios which allow o deal with problems				It is vital to introduce straight line graphs to our Higher students pr solutions. Linear inequalities are included to bridge the gap betwee	
				AUTUMN 2	
Tables and Probability				**Factors, Multiples and Primes**	**Indices and St**
D7 R7 N15 P1 P2 P3 P4			NC Codes	N2	A2, N3, N5, D1
bility to but forward a . Throughout e with the aim of				We build on the number knowledge developed in Year 7 and 8 and by developing students' knowlegde and understanding of standar multiples and primes (knowledege from the previous years), to clo new content. We then recap rounding to enable visualiastion of li	
				SPRING 1 - Fi	
Indices				**Fractions and Ratio**	**Percer**
			NC Codes	N4, N6, N7, D7	
n value. Throughout y unknown value. vns, this units				Building on knowledge from year 8, we recap and develop percen application to employment and key skills needed for retail and fina decay in relation to profit/loss to encourage buisness thinking. Thi and savings accounts.	
				SPRING 2 -	
Number sense				**Area and Volume**	
N14 RP1			NC Codes	N4 G15 G3 G5 G7	
e studnets to have a				Having mastered algebra, number, ratio and proportion, students	
				SUMMER 1 - Constructions	
oning				**Constructions and Congruence**	
			NC Codes	G9 G13 G9	
g geometric				Students continue to develop their geometrical knowledge throug	
				SUMMER 2 - Alge	
and location				**Quadratics and Cubics**	**Algebraic**
			NC Codes	D3 D4 A21 A1 A6 A13	
eseaoned arguments,				Having successfully mastered linear algebra and graphs, students	

					YEAR 10 - HIGHER

gebra 1 (Linear)					
Linear Algebra					**Introduction to Probability**
A2, A14 (linear), A16 (linear), A17 (linear), D4 (linear)A14				NC Codes	D12, P1, P2, N1
ior to algebra to ensure they understand the origins of algebraic en algebra and number, in preparation for 'Number 1'.					Students have prior knowledge of number s students to justify arguements and positive future leaders. The ability to display data, a questions posed and will allow all students t give our students credability within society.

- Number 1					
andard Form	Rounding, Bounds and Introduction to Surds				**Circle Theorems**
	N8, N4 (surds)			NC Codes	G4
d make explicit cross curricular links with Science and Geography d form. In preperation for fractions and ratio, we recap factors, se the gap and ensure students can make appropriate links to ks to upper and lower bounds.					Having previously mastered the properties theorems, which will support future professi the use of scale factors and applying this to the creative arts.

nancial Maths					
ntages	Growth and Decay				**Solving quadratics and quadratic simultaneous equations**
	RP10 R6			NC Codes	A10
ages through multipliers and reverse percentages to enable ancial competence. Students develop the ideas of growth and s unit is underpinned by financial management problems, taxes					Having previously mastered algebraic mani solve quadratics. Students will also investig to which method is more appropriate to use prior knowledge of graphs to express and fi

Geometry					
Angles					**Proportion and Graphs**
G6				NC Codes	D5 R3 A8
develop their geometrical knowledge of area, volume and angles.					Students will continue to make cross curricu

and Right-angled Triangles					
Pythagoras and Trigonometry					**Loci**
D7 G13 G14, G6 G10 G11				NC Codes	
h constructing triangles and applying this knowledge to					Having mastered construction and congruer

bra 2 (Quadratics)					
Fractions	Surds				**Cumulative Frequency and Box Plots**
	N4 D3			NC Codes	D12, D13, S3, S4, S5
develop their knowledge through quadratics and cubics. Students					In Summer 2, students develop more tools t

Explicit in all areas of curriculum D5, D6, D7, D8 D10, D11, D12, D13, So1, So2, So3, So4, So5					
AUTUMN 1 - Data and Probability					
Data, Tables and Charts	**Tree Diagrams and Venn Diagrams**				
S2, S7	**P3, P4**				NC Codes
kills required to express the chance of an event occuring or not occuring. This will allow					
y influence the choices made by others, which will support students in developing into					
nd demonstarte trends, will aid students in the justification of solutions offered to					
o present their thoughts and arguments in a professional and concise manner, which will					
AUTUMN 2 - Circles and Similarity					
Equation of a Circle	**Enlargement and Similarity**				
A12	**G1 G9 R1**				NC Codes
of circles, angles and 2D shapes, students will be able to present solutions using circle					
onal careers such as architecture, design and construction. Students have also mastered					
problems requiring the use of enlargement and similarity, which will support skills within					
SPRING 1 - Algebra 3					
Operations with Algebraic Fractions	**Vectors**				
	G14 G15				NC Codes
pulation, students will be able to apply the principles of factorising and expanding to					
te alternative methods of solving quadratics, which require require decision-making as					
(i.e. quadratic formula/completing the square). Students will also be able to use thier					
nd solutions using graphs. Students will build upon their understanding of both quadratic					
SPRING 2 - Proportionality					
Compound Measures	**Real-life Graphs**				
R2					NC Codes
lar links through furthering their knowledge of direct and inverse proportion and their					
SUMMER 1 - Geometry 3					
Identities and 3D shapes	**Sine and Cosine**				
G8	**G12 G13**				NC Codes
nce in Year 9, students develop these skills through loci. They interleave bearings, scale					
SUMMER 2 - Data Representation					
Frequency Polygons	**Histograms**				
S4, S5	**S3, S4, S5**				NC Codes
o represent data accurately and effectively. They combine this with their algebraic and					

YEAR 11 - HIGHER

D5, D6, D7, D8, D9 D10, D11, So1, So2, So3, So4, So5

AUTUMN 1 - Algebra 4		
Proof and Algebraic Reasoning	Functions	Iteration and Sequences
A3	A4	N2 R6 A15 A18 A19 (quad)

It is imperative for all Year 11 higher students to have a strong algebraic knowledge and this chapter interleaves the content very well as it draws upon their prior knowledge and extends their thoughts into algebraic reasoning. It is therefore highly important that a topic based on algebra is taught at the start of Year 11. It also brings together all the separate entities of algebra into one whole topic.

AUTUMN 2 - Non-Linear Graphs	
Non Linear Graphs	Transforming and Constructing Graphs
D5, A10 R4 R5 A7 A11	G2 A8 A9

Non linear graphs requires a thorough understanding of a lot of topics covered in Y8-10 such as gradient of a line, perpendicular gradients, area of 2D shapes and an awareness of graph shapes etc. The transforming and constructing graphs feeds in well to the trig graphs taught in previous years.

SPRING 1 -

SPRING 2 - Exam Practice

EXAM PREPARATION AND CLOSING THE GAP

This is the term where our Y11 students begin their GCSE examinations. This period of time will be used to

YEAR 9 - FOUNDATION

AUTUMN 1 - Algebra 1 (Linear)

Linear Algebra	Straight Line Graphs	Linear Algebra

NC Codes | **A5, A10, A18 A19 (linear), D8** A21 A2, A14 (linear), A16 (linear), A17 (linear), D4 (linear)A14

It is vital to introduce straight line graphs to our Higher students prior to algebra to ensure they understand the origins of algebraic solutions. Linear inequalities are included to bridge the gap between algebra and number, in preparation for 'Number 1'.

AUTUMN 2 - Number 1

Factors, Multiples and Primes	Indices and Standard Form	Time and Timetables

NC Codes | **N2 A2, N3, N5, D1 N8, N4**

We build on the number knowledge developed in Year 7 and 8 and make explicit cross curricular links with Science and Geography by developing students' knowlegde and understanding of standard form. In preperation for fractions and ratio, we recap factors, multiples and primes (knowledege from the previous years), to close the gap and ensure students can make appropriate links to new content. We then work with students to ensure they are all able to develop their abilities to use time and timetables to effectively plan journeys or organise daily routines.

SPRING 1 - Financial Maths

Fractions	Percentages	Ratio

NC Codes | **N4, N6, N7, D7 RP10 R6**

Building on knowledge from year 8, we recap and develop percentages through multipliers and reverse percentages to enable application to employment and key skills needed for retail and financial competence. Students develop connections between fractions, percentgaes and ratio to provide solutions to problems. This unit is underpinned by financial management problems, taxes and savings accounts.

SPRING 2 - Geometry 1

Area and Volume	Angles 1

NC Codes | **N4** G15 G3 G5 G7 G6

Having mastered algebra, number, ratio and proportion, students develop their geometrical knowledge of area, volume and angles.

SUMMER 1 - Right-angled Triangles

Pythagoras	Bearings	Trigonometry

NC Codes | **D7** G13 G14, G6 G10 G11

Having mastered squares, square roots and rearranging formulae, students will develop principles of use within

SUMMER 2 - Algebra 2 (Quadratics)

Linear Graphs and Sequences	Quadratics

NC Codes | **D3 D4** A21 A1 A6 A13

The ability to spot sequences and patterns is a key skill which will allow students to make informed predictions,

YEAR 10 - FOUNDATION

AUTUMN 1 - Probability and Data

		Recap of number	Introduction to Probability	Data and Tables
	NC Codes		D12, P1, P2, N1	S2, S7

Students have prior knowledge of number skills required to express the chance of an event occuring or not occuring. This will allow students to justify arguements and positively influence the choices made by others, which will support students in developing into future leaders. The ability to display data, and demonstarte trends, will aid students in the justification of solutions offered to questions posed and will allow all students to present their thoughts and arguments in a professional and concise manner, which will give our students credability within society.

AUTUMN 2 - Shape and Reasoning

		Circles, Sectors and Cylinders	Data and Tables 2	Probability
	NC Codes	N4 G15 G3 G5 G7 D12, P1, P2, N1 S2, S7		

Students will be able to build upon their prior knowledge of area and perimeter and apply these to circles and sectors, including recall of required formulae and apply these to solve problems involving circles and sectors. This will support their understanding of volume and surface area of cylinders, further supporting future STEM careers. Throughout this unit, students will develop a deeper understanding of alternative eays to display data, including which is the most appropriate methd, based on the data and the desired outcome. Students will also develop a deeper undertsanding of probability, aloowing them to make sensible estimates and

SPRING 1 - Geometry 2

		Simultaneous Equations	Angles 2	Construction and Congruence
	NC Codes	G9 G13 G9		

Students will apply their prior knolwedge of algebraic manipulation, including solving equations, collecting like terms and substitution to solve two or more unknowns which solve a simultaneuos equation. Studnets will be able to develop and deepen their fine motor skills, including the understanding of angle properties, and this will allow students to draw accurate diagrams and reprsentations to show their thinking, This will support students who have ambitions to follow technical drawing careers, including Engineers, Arbitects and Town Planners

SPRING 2 - Multiplicative Reasoning

		Enlargement and Similarity	Growth and Decay	Harder Fractions, Ratio and Percentages
	NC Codes	G1 G9 R1		

To be fininicially secure, it is important that students are able to have a well developed understanding of Growth and Decay and the

SUMMER 1 - Compound Measures

		Compound Measures	Real Life Graphs
	NC Codes	D5 R3 A8 R2	

Students will continue to make cross curricular links through furthering their knowledge of direct and inverse proportion and their

SUMMER 2 - Algebra and Shape

		Inequalities and Identities	Area and Volume 2	Frequency Polygons
	NC Codes	S4, S5		

Throughout their studies, students will develop an understanding of working with limits, including the imoact of roundig. Throughout

YEAR 11 - FOUNDATION

	AUTUMN 1 - Proportionality and Number		
	Proportion and Graphs	Vectors and Translations	Standard Form and Indices
NC Codes	A2, N3, N5, D1		
	Students will meet Standard Form throughout their studies within Science, so it is therefore key that students are able to comfortably calculate in Standard Form. Students will also explore proportion relationships,including both direct and indirect (inverse). Ths will support students who have ambitions to work as project managers in such areas as Construction, Engineering and other STEM industries.		

	AUTUMN 2 - Geometry 3		
	Transformations	Combining Graphs	Loci
NC Codes			
	Thoughout their studies, students have explored a variety of different ways to express data to influence and presuade, throughout this time, students will develop a deeper understanding of the value of combining graphs to further demonstrate trands and allow them to justfiy arguemnts and solutions made. Students will also use their well developed motor skills to plot loci and shade regions.		

	SPRING 1 -		
	Non Calc Trig		
NC Codes			
	Having previously mastered principles of Trigonometry, students will further develop their understanding by applying non calculator trigonometry to recall facts and apply these to solve problems.		

	SPRING 2 - Exam Practice		
NC Codes			
	This is the term where our Y11 students begin their GCSE examinations. This period of time will be used to		

NC Codes			

NC Codes			