









Curriculum Content Map

Subject: Mathematics

Year group: 7F

	TERM 1		TERM 2		TERM 3	
Unit title & description	Negative numbers Decimals	Operations Primes, factor and multiples Algebra building blocks	Substitution Expanding brackets Factorising into single brackets	Area and Perimeter Fractions 1	Fractions 2 Sequences	Solving linear equations Pictograms Bar charts Pie charts Angles
Sequencing - Why is this taught and now?	These are the fundamental building blocks of mathematics. This term ensures students have a solid understanding to embed within future topics.		This unit on algebra extends the students learning from the previous algebra building blocks unit. Expanding brackets is completed before factorising due to students finding this easier to understand and allowing them to check if they have factorised correctly.	Area and perimeter incorporates the previous learning on algebra via forming expressions. Areas of shapes is incorporated into fractions, via writing and understanding fractions through shading areas of shapes.	The topic of sequences allows for the development of the skill of pattern spotting. Fractional sequences and sequences of different types of numbers are used here.	Algebra is returned to here, with solving simple linear equations to be extended and build on next year. The data handling topics are taught at the end of the year due to requiring students to demonstrate the ability to use mathematical equipment.
Knowledge 	<ul style="list-style-type: none"> -To be able to place negative integers on a number line. -To be able to compare the size of negative integers. -To be able to order negative integers. -To be able to add with negative integers. -To be able to subtract with negative integers. -To be able to place decimal numbers on number lines. -To be able to measure lengths. -To be able to compare the size of decimal numbers. -To be able to order decimal numbers. -To be able to round decimal numbers to 1 and 2 decimal places. -To be able to add decimal numbers. -To be able to subtract decimal numbers. -To be able to multiply decimal numbers. 	<ul style="list-style-type: none"> -To be able to recognise the order of operations in calculations. -To be able to complete calculations using order of operations. -To be able to find multiples of numbers. -To be able to recognise multiples of numbers. -To be able to find the factors of numbers. -To be able to find the HCF by listing factors. -To be able to find the LCM of pairs of numbers by listing. -To be able to recognise the properties of prime numbers. -To understand that letters represent unknowns and recognise like terms. -To be able to collect like terms. -To be able to simplify with multiplication. 	<ul style="list-style-type: none"> -To be able to substitute into expressions. -To be able to substitute into equations. -To be able to expand single brackets with a number outside the bracket. -To be able to expand single brackets with a letter outside the bracket. -To be able to expand single brackets with a number and letter term. -To be able to factorise out the highest numerical factor. -To be able to factorise out algebraic factors. -To be able to fully factorise into single brackets. 	<ul style="list-style-type: none"> -To understand the concept of perimeter. -To be able to count square lengths to find the perimeter. -To be able to find the perimeter of shapes using integers and decimals. -To be able to collect simple like terms with perimeter. -To be able to find the area of squares. -To be able to recognise square numbers. -To be able to find the area of rectangles. -To be able to recognise the link between factors and dimensions. -To be able to find the area of triangles. -To be able to write fractions from diagrams. -To be able to place fractions on a number line. -To be able to cancel fractions down. -To be able to recognise equivalent fractions. 	<ul style="list-style-type: none"> -To be able to compare fractions by making the denominators the same. -To be able to write two amounts as a fraction. -To be able to multiply proper and improper fractions. -To be able to divide proper and improper fractions. -To be able to add and subtract proper and improper fractions. -To be able to change between improper and mixed fractions. -To be able to continue a pictorial sequence. -To be able to form sequences from a given rule. -To be able to recognise the sequence of square and cube numbers. 	<ul style="list-style-type: none"> -To be able to solve one step equations. -To be able to draw pictograms. -To be able to read and interpret pictograms. -To be able to draw bar charts. -To be able to read and interpret bar charts. -To be able to read and interpret pie charts. -To be able to find missing angles around a point. -To be able to find missing angles on a straight line. -To be able to find missing angles in triangles and recognise properties.

		-To be able to divide a decimal number by an integer.					
Skills		Use of numerical and conceptual knowledge. Applying and combining knowledge from different areas of mathematics. Use of mathematical equipment. Problem solving and reasoning; and interpreting questions.					
Retrieval practice Prior knowledge and skills that are revisited		Do nows are structured with questions, from last lesson, last week and last month.		A retrieval lesson is taught on each topic taking into account any gaps identified by topic tests, 1 or 2 weeks after completing teaching of the topic.			
Literacy including extended writing		Key words highlighted in lessons. Interpret information from worded problems and be able to apply relevant techniques based on key words. Guided reading task set for homework once a fortnight highlighting an interesting area of mathematics.					
Numeracy		All lessons are mathematics based and therefore require numeracy.					
Enrichment learning		Students will be given opportunities in lesson to develop soft skills such as teamwork, independence, initiative and responsibility.	Higher attainers to complete the parallel challenges.	UKMT maths challenge to be completed			
British values		British values are not taught in specific topics but in all lessons teacher expectations of students is that they show mutual respect, respect personal liberty, follow academy rules and therefore respect the rule of law and show respect towards each other and value each other's contributions.					
Character		Students challenged to justify their answers and explain their reasoning. Students supported in developing the communication skills required. Students to be encouraged to learn from their mistakes through follow-up tasks. Students encouraged to take pride in their work.					
Careers		Explicit reference will be made throughout the course to careers related to the combination of topics studied. Examples include: <ul style="list-style-type: none">• Medicine,• Social sciences• Pharmacy• Engineering• Logistics• Finance					

Assessment opportunities



AFL strategies embedded into each and every lesson via use of multiple choice questions and/or mini whiteboard work.

Unit tests to be completed at the end of teaching each individual topic highlighting depth of understanding and areas requiring further work.

Cumulative AP assessments completed and levelled for students to assess their progress.

Personalised challenge for all: SEND, HPA

Tasks suitable for students of different levels or prior attainment including challenge for higher attainers