Maths Year 10

Theme:	Core Knowledge	Key Outcomes	Next Stage of Learning
Key Learning/Links to NC	Pathway 1	Pathway 1	Pathway 1
KS3 and KS4 NC Mathematics Programme of study			
	Pathway 2	Pathway 2	Pathway 2
	To understand the concept of time shown in different formats To understand how to use a map To understand the conversion between units of measurement To understand the construction and interpretation of statistical data	To understand a train timetable. To plan a journey using a timetable. To convert between 12- and 24-hour time. To calculate real-life distances using map scales. To calculate the distance of a planned trip in miles or km. To use a given formula to convert data from ^{o}f to ^{o}c. To construct a bar chart/line graph with a suitable scale other than zero. To construct a line graph using ICT. To make a prediction based on data from a graph. To calculate averages based on information from a graph.	Pearson Functional Skills Level 1

	Pathway 3	Pathway 3	Pathway 3

Term 2 Theme:	Core Knowledge	Key Outcomes	Next Stage of Learning
Key Learning/Links to NC	Pathway 1	Pathway 1	Pathway 1
KS3 and KS4 NC Mathematics Programme of study			
	Pathway 2	Pathway 2	Pathway 2
	To understand measurement and conversion between units of measurement To understand how to handle discreet data	To convert metric units. To identify suitable units of measurement within the classroom. To calculate the area of simple shapes. To identify relevant data. To compare data within tables. To calculate averages (mode, mean and median) of data within a table.	Pearson Functional Skills Level 1

		To summarise numerical data and justify their summary. To construct a chart using information they have selected. To construct a chart using information they have selected, using ICT. To evaluate selection of chart. To identify positive correlations.	
	Pathway 3	Pathway 3	Pathway 3

Term 3 Theme:	Core Knowledge	Key Outcomes	Next Stage of Learning
Key Learning/Links to NC	Pathway 1	Pathway 1	Pathway 1
KS3 and KS4 NC Mathematics Programme of study			
	Pathway 2	Pathway 2	Pathway 2
		To create scaled drawings.	Pearson Functional Skills Level 1

	To understand how maths concepts are used in real-life situations (Functional problem-solving unit)	To select correct unit of measure for task. To measure accurately. To calculate perimeter of a room. To calculate area of a room. To calculate cost per m^2. To interpret data from a graph. To evaluate selections using mathematical vocabulary, including costings. To construct an accurate budget. To keep accurate records of their findings. To add monetary values to 2dp. To create scaled 2D models of objects. To calculate percentages of amounts.	
	Pathway 3	Pathway 3	Pathway 3

Term 4 Theme:	Core Knowledge	Key Outcomes	Next Stage of Learning
Key Learning/Links to NC	Pathway 1	Pathway 1	Pathway 1
KS3 and KS4 NC Mathematics Programme of study			
	Pathway 2	Pathway 2	Pathway 2
	To understand how maths concepts are used in real-life situations in order to evaluate a budget (Functional problem-solving unit)	To understand negative numbers in relation to monetary values. To add and subtract numbers to 2dp. To interpret monetary data within a table. To analyse monetary data in order to reduce costs. To present data using tables/spreadsheets. To compare two sets of discreet data. To recap previously taught skills, in preparation for FS1 exam.	Pearson Functional Skills Level 1
	Pathway 3	Pathway 3	Pathway 3

Term 5 Theme:	Core Knowledge	Key Outcomes	Next Stage of Learning
Key Learning/Links to NC	Pathway 1	Pathway 1	Pathway 1
KS3 and KS4 NC Mathematics Programme of study			
	Pathway 2	Pathway 2	Pathway 2
	To understand the place value of positive and negative numbers To understand the four operations in relation to numbers up to and including 1 million To understand algebraic equations	To read numbers of any size, written in both numerals and words. To explain the value represented by a specific digit in any given number. To order positive and negative numbers in ascending/descending order. To compare positive and negative numbers using appropriate symbols (< > =) To accurately add and subtract positive/negative numbers to one million. To accurately multiply and divide positive/negative numbers to one million. To use approximation, rounding, estimation and reverse calculations to check a given answer.	Pearson Functional Skills Level 1 and 2

	To understand the relationship between fractions, decimals and percentages To understand how to solve complex multi-step problems involving percentages by carrying out appropriate mathematical processes	To substitute a correct value for a value in a formula. To evaluate expressions in a given formula. To follow the correct order of operations to evaluate a formula (BIDMAS/BODMAS) To understand the principles for rearranging formulae. To calculate equivalences between fractions, decimals and percentages. To simplify fractions To find a common denominator between fractions. To calculate percentages of quantities. To express amounts as a percentage of another. The calculate percentage change (increase/decrease). To calculate an original value after a percentage change (increase/decrease).	

	Pathway 3	Pathway 3	Pathway 3

Term 6 Theme:	Core Knowledge	Key Outcomes	Next Stage of Learning
Key Learning/Links to NC	Pathway 1	Pathway 1	Pathway 1
KS3 and KS4 NC Mathematics Programme of study			
	Pathway 2	Pathway 2	Pathway 2
	To understand how to solve complex multi-step problems involving fractions by carrying out appropriate mathematical processes. To understand how to solve complex multi-step problems involving decimals by carrying out appropriate mathematical processes.	To simplify fractions to their lowest form. To order and compare fractions in ascending and descending order. To add and subtract proper and improper fractions with different denominators. To express one number as a fraction of another.	Pearson Functional Skills Level 1 and 2

	To understand the application of the four operations in relation to decimals To understand how to scale numbers using ratio and proportion To understand the order of preference of operators, including indices	To explain the value represented by a specific digit in a given decimal. To order decimals in ascending/descending order To compare decimals using appropriate symbols (< > =) Add and subtract decimals up to three places Approximate, by rounding to a whole number or to one, two or three decimal places. To explain the multiplicative relationship between two quantities in a ratio. To simplify ratios. To convert between ratio and fraction. To calculate the value of individual terms in a ratio and increase/decrease using scaling. To explain how variables are related in direct and inverse proportions.	

		To explain the role of the constant in direct and inverse proportion. To explain squaring as a means of multiplying a number by itself. To explain the concept of index notation. To calculate using the order of operations (BIDMAS).	
	Pathway 3	Pathway 3	Pathway 3