



Curriculum Intent

Subject: Mathematics

Year 7

	Topics	Why?	National Curriculum Links
Term 1-1	Number calculations Measures, perimeter and area Expressions	<ul style="list-style-type: none"> - Students will build on prior knowledge, ensuring that all students entering Year 7 have the same understanding to basic number concepts. These ideas will be built on later in the year. - Measurements and conversions need to be understood to allow students to access problem solving questions which may require students to convert between measurements before solving. - Students will also be introduced to perimeter and area of basic shapes to build upon the basic number skills. This is important for students to grasp a concept of how to quantify physical space. - Introducing basic algebra to students to explain why letters are used within Mathematics. This will allow for further concepts to be understood later in the year. 	<ul style="list-style-type: none"> • Using 4 operators • Rounding and approximation • Place value • Use standard metric units • Use of calculator • Algebraic notation • Simplifying expressions
Term 1-2	Fractions, decimals and percentages Angles and 2D shapes Graphs	<ul style="list-style-type: none"> - An understanding to converting between fractions, decimals and percentages will allow students to understand further concepts - Students will build on prior knowledge of angles to provide a strong basic understanding which they will build on in topics taught in KS4 such as trigonometry, circle theorems etc - Naming 2D shapes and learning properties will also build on their prior knowledge of angles and measurements. - Plotting coordinates and straight line graphs, introducing concepts such as gradients and equations of lines. This will build on their prior understandings in expressions. 	<ul style="list-style-type: none"> • FDP equivalence • Percentage change • Operators with fractions • Coordinates • Linear graphs • Angle notation • Properties of shapes
Term 2-1	Further number calculations Statistics	<ul style="list-style-type: none"> - Building on their prior learning in number calculations, students will be taught more complex number calculations which will set them up for upcoming topics. - Students will be introduced to methods to collect data, employ analysis and present results effectively. They will be using further number calculations in this topic. 	<ul style="list-style-type: none"> • Powers and roots • Representing data • Averages
Term 2-2	Equations Factors and Multiples	<ul style="list-style-type: none"> - Building on expressions, students will learn how to solve equations. This concept will be used throughout the years in many topics including, quadratic equations, changing the subject, solving complex number problems. - This topic builds on the prior learning in number topics. The understanding of factors and multiples are needed to allow students to easily navigate number relationships in upcoming topics as well as in the real world. 	<ul style="list-style-type: none"> • Factors and multiples • Substitution • Solving equations
Term 3-1	Ratio and proportion	<ul style="list-style-type: none"> - Students will build on number relationships taught in number calculations and expressions. Ratio analysis is used in real life and is a useful management tool; additionally, this topic will be built on throughout the years. 	<ul style="list-style-type: none"> • Scale maps • Ratio notation • Simplifying ratio • Sharing ratio
Term 3-2	Probability Sequences	<ul style="list-style-type: none"> - Probability is an essential tool in both mathematics and real life. Students will understand how probability is used in understanding the importance of chance and calculating risks in the real world. This topic builds on work with fractions, decimals and percentages and sets a foundation for further and more complex probability topics. 	<ul style="list-style-type: none"> • Probability scale • Probability of events