Maths Curriculum Overview - Year 8 Foundation

	Unit	Details
Autumn One	**Number** **Developing Number Sense**	Pupils will start this year by spending time consolidating previous learning of methods in arithmetic before developing mental strategies for calculations such as using factors to simplify calculations and using known number facts to derive other facts.
Autumn Two	**Ratio and Scale** **Tables and Probability** **Multiplicative change**	Pupils will solve proportional problems using ratio before dividing a value into a given ratio. They will then compare ratios and related fractions before using ratio in the context of circles and gradients. Pupils then learn how to find probability from two way tables and sample space diagrams before developing the concepts from the ratio topic to explore conversion graphs and relationships between similar shapes.
Spring One	**Working in the Cartesian plane** **Representing data**	Coordinates work from Year 6 will now be used to work with coordinates in all four quadrants. Pupils will learn to recognise and write the equation for linear graphs by exploring the gradient and intercept. They will also explore non-linear graphs and find the midpoint of a line segment. The concepts from this half term are then linked to data handling by using scatter graphs and interpreting lines of best fit before reading and interpreting grouped frequency tables.
Spring Two	**Fractions: Four Operations** **Sequences**	Pupils will explore fraction equivalence before learning to add and subtract fractions with any denominator and using fractions in algebraic contexts. They will then multiply and divide fractions including how to use the reciprocal. Pupils will extend these methods to multiply and divide improper and mixed fractions. Pupils then spend time generating sequences given a rule in words and given both a simple and complex algebraic rule before finding the nth term of a linear sequence.
Summer One	**Indices** **Standard index form**	We start this half term practising how to add, subtract, multiply and divide expressions with indices and then exploring powers of powers. Pupils then develop their understanding of indices to compare and order numbers in standard form and add, subtract, multiply and divide with numbers in standard form both mentally and using a calculator.
Summer Two	**Line symmetry and reflection** **Rotation and translation**	Pupils finish the year by using previous concepts learned in geometry to recognise line symmetry and reflect a shape in a horizontal, vertical or diagonal line. We will then look at other transformations, describing and finding rotations and translations.