

## Year 8 – Algebraic Thinking

## Term 3

Stage	Description		
	Section A Prerequisites	Section B Brackets, equations and inequalities	Section C Indices
Emerging	<ul style="list-style-type: none"> <li>Can deal with values up to three decimal places with a focus on the use of exchange.</li> </ul>	<ul style="list-style-type: none"> <li>Can create the link between fractions and percentages, with focus on changing between fluently.</li> </ul>	<ul style="list-style-type: none"> <li>Understand the relationship with two parts in a ratio and link back to fractions.</li> <li>Can simplify ratios and share into a ratio.</li> </ul>
Developing	<ul style="list-style-type: none"> <li>Can simplify expressions fully.</li> <li>Can apply all four operations to negatives.</li> <li>Can input into function machines.</li> <li>Can substitute positive values into an expression.</li> <li>Can use bar modelling as a representation of <math>+</math> <math>-</math> <math>\times</math> <math>\div</math></li> <li>Can solve 1 step equations.</li> <li>Can find factors and highest common factors.</li> <li>Find the area of a rectangle.</li> <li>Generate a sequence from the nth term</li> <li>Can switch between numerical and index form.</li> </ul>	<ul style="list-style-type: none"> <li>Can form algebraic expressions from words, images and also including perimeters.</li> <li>Simplifying expressions with negatives.</li> <li>Multiply out a single bracket using algebra tiles.</li> </ul>	<ul style="list-style-type: none"> <li>Solve one step equations with negatives</li> <li>Can form and solve equations from function machines, THOANS and words.</li> <li>Can identify if a term in a sequence.</li> <li>Understand inequality symbols.</li> <li>Can use correct vocabulary to describe is something is a formula, identity, expression, equation, subject or variable.</li> </ul>
Secure		<ul style="list-style-type: none"> <li>Factorise into a single bracket linking with algebra tiles/area.</li> <li>Can expand and simplify two set of single brackets.</li> <li>Collecting like terms with different indices.</li> <li>Multiply/divide terms with indices</li> </ul>	<ul style="list-style-type: none"> <li>Can solve two step equations with negatives, decimals and fractions</li> <li>Solve equations with brackets</li> <li>Solve simple inequalities</li> </ul>
Excellence		<ul style="list-style-type: none"> <li>Can expand a pair of binomials using algebra tiles</li> <li>Generate sequence with more complex rules.</li> </ul>	<ul style="list-style-type: none"> <li>Form and solve inequalities, unknowns on both sides.</li> </ul>