



# KEY STAGE 3 – YEAR 7 – MATHS

## CURRICULUM MAP

Autumn Term		Spring Term		Summer Term	
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Themes	Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
<p>Solving problems where students are required to long divide and multiply with decimals</p> <p>Round numbers to any given number of DP or SF</p> <p>Understand that rounding reduces accuracy, and consider upper and lower bounds</p> <p>Use rounding to make sensible estimated answers</p> <p>Perimeters of shapes</p> <p>Area of planar shapes – rectangle, triangle, parallelogram, rhombus, kite, trapezium</p> <p>Area of compound shapes</p>	<p>Calculation with negative numbers</p> <p>Order of operations with numbers and its link to algebra</p> <p>Creating and using formulae from real life situations</p> <p>Substitution, into such formulae (using a calculator if necessary)</p> <p>Simplifying expressions – e.g. Perimeter of a shape may be <math>2a + 3a + 4a + 3a</math>, can be easier written as <math>12a</math></p> <p>Factors and multiples, prime factors.</p> <p>Linear brackets, expanding and factorising</p> <p>Expanding double brackets and factorising simple quadratics (with positive coefficients)</p> <p>Rearranging formulae (simple)</p>	<p>Equivalence between Fractions, Decimals and Percentages</p> <p>Four operations with fractions</p> <p>Finding fractions of amounts.</p> <p>Working with percentages: finding a percentage of an amount, increase/decrease an amount by a given percentage.</p> <p>Use of ratio: expressing as a ratio, dividing into, using ratio to solve problems.</p> <p>Conversion between different metric units.</p> <p>Use of scales on maps</p> <p>Using ratio with measures</p>	<p>Link visual patterns to points plotted on a set of axes.</p> <p>Understanding of the term ‘arithmetic’ and associating that with the points on the graph/gradient. We cannot draw a line through the points. Sequences can have negative terms AND/OR a negative common difference.</p> <p>Construct a sequence using its nth term rule, where ‘n’ represents the position of the term. Students should make the link between the difference between each term, the position of the points on the axes and the coefficient of ‘n’. In this case ‘n’ must be a whole number.</p> <p>Work out the nth term rule for arithmetic sequences</p> <p>Problem solving with sequences e.g working out if a term is in a sequence, working out a term given its position.</p> <p>Generalise understanding to include decimals – use ‘x’ instead of ‘n’. We can now draw a line through the points.</p> <p>Solve problems involving gradient and y-intercept: <math>y=mx+c</math>. Solve simple linear equations – link this to straight line graphs and finding the x coordinate when given the y coordinate. Link understanding of straight line graphs to real life situations such as Distance – time graphs. Gradient represents speed.</p>	<p>Revise reflection and translation and the concept of reflecting and rotating on a co-ordinate grid.</p> <p>Review equations of straight lines (particularly vertical and horizontal) and use for reflection.</p> <p>Introduce rotation and use tracing paper to find centres of rotation.</p> <p>Introduce column vectors for use with translation.</p> <p>Use A1B1C1 and A2B2C2 notation for object and images.</p> <p>Extend with enlargement from given centre as appropriate.</p> <p>Classification of 2D shapes, in particular quadrilaterals and their properties.</p> <p>Drawing 2D shapes accurately with protractor</p> <p>Revise geometric reasoning, emphasising need to give a reason for each stage of a calculation.</p> <p>Review labelling of angles such as ABC</p>	<p>Bar charts, line graphs, pie charts, scatter graphs</p> <p>Positive and Negative correlations, lines of best fit (linear only in Maths but need to consider curved fits for Science)</p> <p>Extrapolation and interpolation of data – the dangers and the uses.</p> <p>Discrete, continuous data Classes (e.g. <math>30\text{cm} &lt; \text{height} \leq 40\text{cm}</math>) and tallies</p> <p>When is a bar chart appropriate, i.e. only for discrete data</p> <p>When is any chart appropriate? Choosing the best way to display data</p> <p>Posing hypotheses, gathering information, analysing data and concluding with appropriate displays.</p> <p>Averages and ranges and when are which most appropriate?</p> <p>Averages of data collated in frequency tables</p>
Assessment / Composite Tasks	Assessment / Composite Tasks	Assessment / Composite Tasks	Assessment / Composite Tasks	Assessment / Composite Tasks	Assessment / Composite Tasks
Unit Test 7.1	Unit Test 7.2	Unit Test 7.3	Unit Test 7.4	Unit Test 7.5	Unit Test 7.6