

Curriculum plan Maths

	Autumn half term 1	Autumn half term 2	Easter half term 1	Easter half term 2	Summer half term 1	Summer half term 2
Year 7	<p>Calculation. Using $+$ $-$ \times \div $<$ $>$ $=$ \geq \neq</p> <p>Adding, subtracting, multiplication and division</p> <p>Rounding and approximation</p> <p>Recognise and use square and cube numbers</p> <p>Read, write and evaluate powers Know the meaning of expression, term, formula, equation, function</p>	<p>Area and Perimeter of simple shapes</p> <p>Use a ruler to accurately measure line segments to the nearest millimetre</p> <p>Use a protractor to accurately measure angles to the nearest degree</p> <p>Convert fluently between metric units of length</p> <p>Convert fluently between metric units of mass</p> <p>Convert fluently between metric units of volume / capacity</p> <p>Convert fluently between units of time</p>	<p>Write one quantity as a fraction of another where the fraction is less than 1</p> <p>Write one quantity as a fraction of another where the fraction is greater than 1</p> <p>Write a percentage as a fraction</p> <p>Write a quantity as a percentage of another</p> <p>Recognise and solve problems using vertically opposite angles</p> <p>Recognise and solve problems using angles at a point</p> <p>Recognise and solve problems using angles at a point on a line</p>	<p>Solve one-step equations when the solution is a positive integer or fraction</p> <p>Solve two-step equations when the solution is a positive integer or fraction</p> <p>Solve three-step equations when the solution is a positive integer or fraction</p> <p>Solve multi-step equations including the use of brackets when the solution is a positive integer or fraction</p> <p>Solve equations when the solution is an integer or fraction</p>	<p>Find the mode of set of data</p> <p>Find the median of a set of data including when there are an even number of numbers in the data set</p> <p>Calculate the mean from a frequency table</p> <p>Find the mode from a frequency table</p> <p>Find the median from a frequency table</p> <p>Calculate and understand the range as a measure of spread (or consistency)</p> <p>Analyse and compare sets of data, appreciating the limitations of different statistics (mean, median, mode, range)</p>	<p>Interpret and construct frequency tables</p> <p>Construct and interpret bar charts and know their appropriate use</p> <p>Construct and interpret comparative bar charts</p> <p>Construct and interpret pie charts and know their appropriate use</p> <p>Construct and interpret vertical line charts</p> <p>Choose appropriate graphs or charts to represent data</p>



	Autumn half term 1	Autumn half term 2	Easter half term 1	Easter half term 2	Summer half term 1	Summer half term 2
		<p>Convert fluently between units of money</p> <p>Know and use basic algebraic notation (the 'rules' of algebra)</p> <p>Simplify a simple expression by collecting like terms</p> <p>Simplify more complex expressions by collecting like terms</p> <p>Manipulate expressions by multiplying an integer over a bracket (the distributive law)</p> <p>Manipulate expressions by multiplying a single term over a bracket (the distributive law)</p> <p>Substitute positive numbers into expressions and formulae</p>	<p>Describe a comparison of measurements or objects using ratio notation a:b</p> <p>Simplify a ratio by cancelling common factors</p> <p>Divide a quantity in two parts in a given part:part ratio</p> <p>Divide a quantity in two parts in a given part:whole ratio.</p>		<p>Recognise simple arithmetic progressions</p> <p>Use a term-to-term rule to generate a linear sequence</p> <p>Use a term-to-term rule to generate a non-linear sequence</p>	



	Autumn half term 1	Autumn half term 2	Easter half term 1	Easter half term 2	Summer half term 1	Summer half term 2
Year 8	<p>Fractions, decimals and Percentages (including recurring decimals). Interpret standard form $A \times 10^n$, where $1 \leq A < 10$ and n is an integer</p> <p>Index Laws</p> <p>Use and interpret algebraic notation, including: $a^2 b$ in place of $a \times a \times b$, coefficients written as fractions rather than as decimals</p> <p>Simplify an expression involving terms with combinations of variables (e.g. $3a^2b + 4ab^2 + 2a^2 - a^2b$)</p>	<p>Express the division of a quantity into two parts as a ratio</p> <p>Understand the connections between ratios and fractions</p> <p>Find a relevant multiplier in a situation involving proportion</p> <p>Solve ratio problems involving mixing</p> <p>Solve ratio problems involving comparison</p> <p>Solve ratio problems involving concentrations</p> <p>Factorise an algebraic expression by taking out common factors</p> <p>Simplify expressions using the law of indices for multiplication</p> <p>Simplify expressions using the law of indices for division</p>	<p>Properties and construction – angle facts angle in polygons</p> <p>Identify line and rotational symmetry in polygons</p> <p>Understand and use labelling notation for lengths and angles</p> <p>Use ruler and protractor to construct triangles, and other shapes, from written descriptions</p> <p>Use ruler and compasses to construct triangles when all three sides known</p>	<p>Pythagoras and Trigonometry. Nets, surface area and volume.</p> <p>Solve missing angle problems involving alternate angles</p> <p>Solve missing angle problems involving corresponding angles</p> <p>Use knowledge of alternate and corresponding angles to calculate missing angles in geometrical diagrams</p> <p>Establish the fact that angles in a triangle must total 180°</p>	<p>Use the centre and scale factor to carry out an enlargement with a positive integer scale factor</p> <p>Find the centre of enlargement</p> <p>Find the scale factor of an enlargement</p> <p>Use scale diagrams, including maps</p> <p>Use the concept of scaling in diagrams</p> <p>Interpret plans and elevations</p> <p>Understand and use bearings</p> <p>Notation, vocabulary and manipulation involving quadratic expressions and equations. Linear graphs in all four quadrants ($y=mx+c$)</p>	<p>List all the outcomes for an experiment, including the use of tables</p> <p>Work out theoretical probabilities for events with equally likely outcomes</p> <p>Know that the sum of probabilities for all outcomes is 1</p> <p>Apply the fact that the sum of probabilities for all outcomes is 1</p> <p>Plot a scatter diagram of bivariate data</p> <p>Interpret a scatter diagram using understanding of correlation</p> <p>Generate terms of a sequence from a position-to-term rule</p>



	Autumn half term 1	Autumn half term 2	Easter half term 1	Easter half term 2	Summer half term 1	Summer half term 2
					<p>Simplify expressions using the law of indices for powers</p> <p>Know and use the zero index</p> <p>Substitute positive and negative numbers into formulae</p> <p>Change the subject of a formula when one step is required</p> <p>Change the subject of a formula when two steps are required</p>	<p>Find the nth term of an ascending linear sequence</p> <p>Find the nth term of an descending linear sequence</p> <p>Use the nth term of a sequence to deduce if a given number is in a sequence</p>
Year 9	<p>Calculate with roots, and with integer and fractional indices.</p>	<p>Algebraic tinkering, involving inequalities and quadratics.</p> <p>Graphs.</p> <p>Quadratic and geometric sequences</p> <p>Pythagoras and Trig.</p> <p>Quadratic sequences</p> <p>Ratio and proportionality</p>	<p>Scale factor, rates of pay, change on graphs.</p> <p>Mensuration and calculation.</p>	<p>Understand and use compound units</p> <p>Convert between units of speed</p> <p>Solve problems involving speed</p> <p>Solve problems involving rates of pay</p> <p>Solve problems involving unit pricing</p>	<p>Transformation of graphs</p> <p>Construct scale diagrams involving bearings</p> <p>Solve geometrical problems using bearings</p> <p>Conditional probability, tree diagrams and two way tables.</p>	<p>Construct and interpret histograms for grouped data with equal class intervals</p>



	Autumn half term 1	Autumn half term 2	Easter half term 1	Easter half term 2	Summer half term 1	Summer half term 2
					Measure of central tendency. Box plots and cumulative frequencies	
Year 10	Measure and accuracy Surds	Graphs - Inverse and direct proportion Growth and decay	Graphs - Translations, Functions with inputs and outputs Sequences. Proofs	Sine, cosine rules and area of any triangles. Sector and arcs area and perimeter.	Venn diagrams Histograms	
Year 11	Graphs – velocity time graphs, circles and non-linear	Vectors	Gap analysis revision and mock exams	Gap analysis revision and mock exams	Gap analysis revision. GCSE EXAMS	