

Curriculum Implementation Mapping – Skills and Knowledge

Subject: Maths

Year group: 10 Foundation

Topic	Term 1	Term 2	Term 3
Knowledge	<p>Geometry and measures: perimeter and area (including circles).</p> <p>Probability: calculations, mutually exclusive events, experimental probability and expectations.</p> <p>Number: Review of number work from year 9.</p> <p>Review and revision: review of topics above.</p>	<p>Algebra: solving linear equations by various methods including variables on both sides.</p> <p>Geometry and measures: introduction to Pythagoras and trigonometry.</p> <p>Ratio, Proportion and Rates: review of topics from year 9.</p> <p>Review and revision: review of topics above.</p>	<p>Number review: recap basic number skills, fractions, decimals and percentages from Year 9.</p> <p>Ratio, proportion and rates: equivalence in fractions, decimals and percentages, calculate percentages of an amount, percentage change and compound measures.</p> <p>Geometry and measures: volume and surface area.</p>
Skills	<p>Geometry: perimeter and area of rectangles, compound shapes, triangles, parallelograms, trapeziums and circles.</p> <p>Probability: calculate a probability, use probability language, calculate the probability of an event not happening, mutually exclusive and exhaustive events, experimental probability, systematic listing strategies and expected outcomes.</p> <p>Number: Written methods for multiplying and dividing, working with negative numbers and fractions. Rounding correctly to all accuracies.</p>	<p>Algebra: solve equations with the variable on one side by balancing, solve equations using inverse flow diagrams and solve equations in which the variable is on the numerator of a fraction. Solving equations in which at least one side has a bracket, solving with variables on both sides, word problem equations.</p> <p>Geometry: introduce Pythagoras and use it to find shorter and longer sides, also use it for isosceles triangles, calculate lengths and angles using trigonometry, learn exact trig values, use for isosceles triangles, problem solving with trigonometry and Pythagoras.</p> <p>Ratio, Proportion and Rates: dividing into ratios and complete calculations give parts. Combine ratios and problem solving. Solve problems involving direct proportion, speed distance time and best buys.</p>	<p>Number: Find LCM and HCF of two or more numbers. Use prime factors to identify the LCM or HCF.</p> <p>Ratio: percentage of an amount, converting between fractions, decimals and percentages, expressing an amount as a percentage of another and using compound measures.</p> <p>Geometry: identifying properties of 3D shapes, calculating the volume and surface area of cuboids, prisms and cylinders.</p>
Assessment Pattern	1 hour Summary Assessment to be sat in class	Teacher Assessment	1 hour Summary Assessment to be sat in class

Topic	Term 4	Term 5	Term 6
Knowledge	<p>Linear Graphs: review of linear graphs from year 9.</p> <p>Statistics: using sampling, pie charts and scatter graphs.</p> <p>Ratio, proportion and rates: compound interest, reverse percentage problems and direct and inverse proportion</p>	<p>Algebra: Changing the subject, quadratic expressions review from year 9 and simultaneous equations.</p> <p>Geometry and Measures: symmetry, transformations, vectors.</p> <p>Geometry Review: Review of Pythagoras and Trigonometry from year 9.</p>	<p>Statistics: Review of averages from year 9, calculating averages from a frequency table, including grouped frequency tables</p>
Skills	<p>Linear Graphs: plot a linear graph accurately, find the equation of a linear graph, find the equation of a line from 2 coordinates and find the equation of a parallel line through a point.</p> <p>Stats: understanding bias when collecting a sample and using a random sample. Draw and interpret pie charts and use scatter graphs. Draw and use the line of best fit.</p> <p>Ratio: calculate simple and compound interest, solve problems involving reverse percentage and use direct and inverse proportion. For proportion, use algebraic and real-life questions.</p>	<p>Algebra review: Rearrange a formula to change the subject. Expand and simplify double brackets to form a quadratic expression. Factorise quadratic expressions. Solve a quadratic equation by factorising.</p> <p>Geometry and Measures: Recognise shapes with lines of symmetry. Recognise and find the order of rotational symmetry. Reflect a 2D shape in a mirror line. Rotate a 2D shape about a point. Translate a 2D shape by a vector. Enlarge a 2D shape by a scale factor, including fractional. Describe transformations accurately. Represent vectors using correct notation. Work with vectors on a grid. Add and subtract vectors. Multiply by a scalar.</p> <p>Geometry review: Find a missing side length using pythagoras' theorem. Solve problems involving pythagoras' theorem. Find a missing side length using trigonometry. Find a missing angle using trigonometry. Solve problems involving trigonometry.</p>	<p>Statistics: calculate averages and range from a list of numbers, interpret an average and range in context, solve problems involving averages and range. Calculate averages from a frequency table (median, mode, mean and range) and estimate averages from a grouped frequency (median and mean) and identify a modal group.</p>
Assessment Pattern	Teacher Assessment	Teacher assessment.	End of year: Mocks. Full set of GCSE papers sat in the hall.