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| *What will they be learning, why and in what order?* |
| **Maths Year 9** | **Term 1** | **Term 2** | **Term 3** |
| **Bridge/ Foundation knowledge required** | Cartesian Plane Year 8Sequences Year 7Algebra Year 6Understand and use algebraic notation Year 7Multiplication and Division Year 4 and 5Place Value Years 4-6Shape Year 1Properties of shapes Years 2-6Properties of Shape Year 6Constructing, measuring and using geometric notation Year 7 | Fractions Years 5 and 6Percentages Year 6Money Years 2 and 4Angles in parallel lines and polygons Year 8Properties of shape Year 5 and 6Position and Direction Year 6Constructing, measuring and using geometric notation Year 7Position and direction Years 4-6Working in the cartesian plane Year 8Properties of shape Year 2-6Algebra Year 6Indices Year 8 | Solve problems with multiplication and division Year 7Multiplication and Division Year 4 and 5Properties of shape Years 5 and 6Ratio and scale Year 8Ratio Year 6Converting Units Years 5 and 6Sets and probability Year 7Tables and probability Year 8Statistics Years 2-6Algebra Year 6Forming and solving equations Year 9Understand and use algebraic notation Year 7 |
| **Key Learning Experience / Skills** | Straight line graphsForming and solving equationsTesting conjectures3D shapesConstructions and congruency | NumbersUsing percentagesMaths and moneyDeductionRotation and translationPythagoras’ theorem | Enlargement and similaritySolving ratio and proportion problemsRatesProbabilityAlgebraic representation |
| **Assessment**How will you assess the impact of teaching? | Demonstrate, Consolidate and Extend Green tickets Book Inserts Low stakes assessment | Demonstrate, Consolidate and Extend Green tickets Book Inserts Low stakes assessment | Demonstrate, Consolidate and Extend Green tickets Book Inserts Low stakes assessment |
| **CIAG Links** | Straight Line Graphs: Essential in fields like engineering, economics, and data analysis for modelling relationships between variables and predicting outcomes.Forming and Solving Equations: Important in computer science, finance, and physics for problem-solving and modelling real-world situations with mathematical expressions.Testing Conjectures: Key in scientific research, mathematics, and engineering for developing hypotheses and validating theories through experimentation and logical reasoning.3D Shapes: Crucial in architecture, product design, and animation for visualizing and creating three-dimensional objects and understanding spatial relationships.Constructions and Congruency: Important in fields like engineering, robotics, and graphic design for accurately creating shapes and ensuring precision in models and structures. | Numbers: Essential for everyday calculations and foundational for careers in finance, engineering, and data analysis where numerical literacy is crucial.Using Percentages: Important in retail, banking, and marketing for calculating discounts, interest rates, and understanding data representation.Maths and Money: Key for personal finance, budgeting, and accounting, helping individuals manage their finances and make informed financial decisions.Deduction: Crucial in fields like law, computer science, and critical thinking, where logical reasoning and problem-solving are necessary for drawing conclusions.Rotation and Translation: Important in graphic design, animation, and robotics for manipulating shapes and understanding movements in two-dimensional and three-dimensional spaces. | Enlargement and Similarity: Essential in fields like architecture, design, and photography for understanding scale and creating proportional representations of objects.Solving Ratio and Proportion Problems: Important in cooking, chemistry, and finance for adjusting recipes, mixing solutions, and managing budgets based on relative quantities.Rates: Key in economics, logistics, and travel for calculating speed, cost per unit, and time efficiency, which are vital for planning and decision-making.Probability: Crucial in fields like insurance, finance, and data science for assessing risks, making predictions, and analysing data trends.Algebraic Representation: Important in computer programming, engineering, and science for modelling real-world scenarios and solving complex problems using variables and equations. |
| **British Values**  | Democracy: Students vote on which graph type to use for a data presentation.Respect: Students listen to and respect different methods for solving equations.Tolerance: Lessons include mathematical contributions from diverse cultures.Liberty: Students choose their preferred method for solving problems.Rule of Law: Clear rules, like angle laws, are followed in geometry proofs. |
| **Cross Curricular Link Numeracy** | Science: Analyse more complex data.Geography: Explore deeper spatial concepts.History: Dive into historical data analysis.Design and Technology: Apply numeracy in design and costing.English: Use numeracy in interpreting and writing narratives.Art and Design: Explore numeracy in artistic compositions.PE: Apply numeracy to analyse sports biomechanics. | **Cross Curricular Link Literacy** | Interpreting mathematical models in real-world contexts through written analysis.Writing detailed solutions and justifications for problem-solving tasks.Using precise mathematical terminology in essays and explanations.Analysing statistical data in reports or articles.Constructing logical arguments in persuasive writing, supported by mathematical evidence.  |
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| ***The Hub Vision – A School that provides all students with exciting opportunities that build confidence, develop social skills and promote academic achievement*** |

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