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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 8  Sequences Year 7  Algebra Year 6  Understand and use algebraic notation Year 7  Multiplication and Division Year 4 and 5  Place Value Years 4-6  Shape Year 1  Properties of shapes Years 2-6  Properties of Shape Year 6  Constructing, measuring and using geometric notation Year 7 | Fractions Years 5 and 6  Percentages Year 6  Money Years 2 and 4  Angles in parallel lines and polygons Year 8  Properties of shape Year 5 and 6  Position and Direction Year 6  Constructing, measuring and using geometric notation Year 7  Position and direction Years 4-6  Working in the cartesian plane Year 8  Properties of shape Year 2-6  Algebra Year 6  Indices Year 8 | | | Solve problems with multiplication and division Year 7  Multiplication and Division Year 4 and 5  Properties of shape Years 5 and 6  Ratio and scale Year 8  Ratio Year 6  Converting Units Years 5 and 6  Sets and probability Year 7  Tables and probability Year 8  Statistics Years 2-6  Algebra Year 6  Forming and solving equations Year 9  Understand and use algebraic notation Year 7 |
| **Key Learning Experience / Skills** | Straight line graphs  Forming and solving equations  Testing conjectures  3D shapes  Constructions and congruency | Numbers  Using percentages  Maths and money  Deduction  Rotation and translation  Pythagoras’ theorem | | | Enlargement and similarity  Solving ratio and proportion problems  Rates  Probability  Algebraic 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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