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| *What will they be learning, why and in what order?* |
| **Maths Year 10** | **Term 1** | **Term 2** | **Term 3** |
| **Bridge/ Foundation knowledge required** | Enlargement and similarity Year 9Solve problems with multiplication and division Year 7Multiplication and Division Year 4 and 5Properties of shape Years 5 and 6Properties of shape Years 2-6Position and Direction Year 6Constructing, measuring and using geometric notation Year 7Angles in parallel lines and polygons Year 8Brackets, equations and inequalities Year 8Operations and equations with directed number Year 7Algebra Year 6Equality and Equivalence Year 7Algebra Year 6Equality and Equivalence Year 7Algebraic notation Year 7Operations and equations with directed number Year 7Brackets, equations and inequalities Year 8Forming and solving equations Year 9 | Position and Direction Years 5 and 6Properties of shape Year 5Constructing, measuring and using geometric notation Year 7Developing geometric reasoning Year 7Angles in parallel lines and polygons Year 8Area Year 4Perimeter and Area Year 5Perimeter, Area and Volume Year 6Properties of Shape Year 6Area of Trapezia and Circles Year 8Algebra Year 6Understand and use algebraic notation Year 7Geometric reasoning Year 7Ratio and scale Year 8Ratio Year 6Solving ratio and proportion problems Year 9Fractions and percentages Year 8Fraction, decimal, percentage equivalence Year 7Fractions Years 5 and 6Using percentages Year 9Percentages Year 6Fraction, decimal, percentage equivalence Year 7 | Statistics Years 2-6Representing data Year 8Addition and Subtraction Years 2-6Multiplication and Division Years 2-6Place Value Year 5Developing Number Sense Year 7Number sense Year 8Place Value Years 1-5Prime numbers and proof Year 7Sequences Years 7 and 8Indices Year 8Decimals Years 4-6Indices Year 8Solving Problems with Multiplication and Division Year 7Standard Index Form Year 8Place Value Year 6Brackets, equations and inequalities Year 8Operations and equations with directed number Year 7Algebra Year 6Understand and use algebraic notation Year 7 |
| **Key Learning Experience / Skills** | Congruence, similarity and enlargementTrigonometryRepresenting solutions of equations and inequalitiesSimultaneous equations | Angles and bearingsWorking with circlesVectorsRatios and fractionsPercentages and interestProbability | Collecting, representing and interpreting dataNon-calculator methodsTypes of number and sequencesIndices and routesManipulating expressions |
| **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** | Congruence, Similarity, and Enlargement: Essential in fields like architecture, engineering, and art for creating scaled designs and understanding geometric relationships between shapes.Trigonometry: Important in physics, engineering, and computer graphics for analysing relationships in triangles, calculating heights, and modelling wave patterns.Representing Solutions of Equations and Inequalities: Key in finance, data analysis, and economics for visualizing data trends and making informed decisions based on mathematical models.Simultaneous Equations: Crucial in computer programming, engineering, and economics for solving complex problems involving multiple variables and finding optimal solutions. | Angles and Bearings: Essential in navigation, architecture, and engineering for determining directions, constructing plans, and ensuring precise measurements.Working with Circles: Important in fields like design, engineering, and astronomy for calculating areas, circumferences, and understanding circular motion.Vectors: Key in physics, computer graphics, and engineering for representing quantities with direction and magnitude, essential for modelling movement and forces.Ratios and Fractions: Crucial in finance, cooking, and chemistry for comparing quantities, adjusting recipes, and working with concentrations in solutions.Percentages and Interest: Important in banking, finance, and sales for calculating profit margins, loan repayments, and understanding financial growth.Probability: Essential in data analysis, risk assessment, and game design for evaluating chances of events and making informed decisions based on statistical trends | Collecting, Representing, and Interpreting Data: Essential in research, marketing, and social sciences for gathering insights, making data-driven decisions, and understanding trends.Non-Calculator Methods: Important in everyday problem-solving, finance, and mental math for enhancing numerical skills and quick calculations without technology.Types of Numbers and Sequences: Key in computer science, engineering, and finance for understanding patterns, algorithms, and numerical properties in various applications.Indices and Roots: Crucial in science, engineering, and finance for simplifying calculations, understanding exponential growth, and solving equations involving powers.Manipulating Expressions: Important in programming, mathematics, and engineering for simplifying formulas, solving problems, and modelling real-world scenarios. |
| **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: Dive into more intricate data analysis.Geography: Explore advanced spatial concepts.History: Analyse historical trends and events.Design and Technology: Manage budgets and design complexities.English: Apply numeracy in analysing poetry and prose.Art and Design: Investigate intricate numerical relationships.PE: Apply numeracy for sports optimization. | **Cross Curricular Link Literacy** | Interpreting and summarizing complex mathematical concepts in written form.Writing clear justifications and explanations for advanced problem-solving.Using mathematical terminology accurately in research projects or essays.Analysing data and graphs in articles and reports.Formulating logical, evidence-based arguments supported by mathematical reasoning.  |
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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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