|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *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 9  Solve problems with multiplication and division Year 7  Multiplication and Division Year 4 and 5  Properties of shape Years 5 and 6  Properties of shape Years 2-6  Position and Direction Year 6  Constructing, measuring and using geometric notation Year 7  Angles in parallel lines and polygons Year 8  Brackets, equations and inequalities Year 8  Operations and equations with directed number Year 7  Algebra Year 6  Equality and Equivalence Year 7  Algebra Year 6  Equality and Equivalence Year 7  Algebraic notation Year 7  Operations and equations with directed number Year 7  Brackets, equations and inequalities Year 8  Forming and solving equations Year 9 | Position and Direction Years 5 and 6  Properties of shape Year 5  Constructing, measuring and using geometric notation Year 7  Developing geometric reasoning Year 7  Angles in parallel lines and polygons Year 8  Area Year 4  Perimeter and Area Year 5  Perimeter, Area and Volume Year 6  Properties of Shape Year 6  Area of Trapezia and Circles Year 8  Algebra Year 6  Understand and use algebraic notation Year 7  Geometric reasoning Year 7  Ratio and scale Year 8  Ratio Year 6  Solving ratio and proportion problems Year 9  Fractions and percentages Year 8  Fraction, decimal, percentage equivalence Year 7  Fractions Years 5 and 6  Using percentages Year 9  Percentages Year 6  Fraction, decimal, percentage equivalence Year 7 | | | Statistics Years 2-6  Representing data Year 8  Addition and Subtraction Years 2-6  Multiplication and Division Years 2-6  Place Value Year 5  Developing Number Sense Year 7  Number sense Year 8  Place Value Years 1-5  Prime numbers and proof Year 7  Sequences Years 7 and 8  Indices Year 8  Decimals Years 4-6  Indices Year 8  Solving Problems with Multiplication and Division Year 7  Standard Index Form Year 8  Place Value Year 6  Brackets, equations and inequalities Year 8  Operations and equations with directed number Year 7  Algebra Year 6  Understand and use algebraic notation Year 7 |
| **Key Learning Experience / Skills** | Congruence, similarity and enlargement  Trigonometry  Representing solutions of equations and inequalities  Simultaneous equations | Angles and bearings  Working with circles  Vectors  Ratios and fractions  Percentages and interest  Probability | | | Collecting, representing and interpreting data  Non-calculator methods  Types of number and sequences  Indices and routes  Manipulating 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. | |
| |  | | --- | | ***The Hub Vision – A School that provides all students with exciting opportunities that build confidence, develop social skills and promote academic achievement*** | | | | | | |