Mathematics Learning Journey

Reasoning Review
- Multiplicative reasoning
- Geometric reasoning
- Algebraic reasoning

Reasoning Review

Revision and Communication

Examinations

Year 12 and Year 13 :
- A-Level Maths
- A-Level Further Maths
- Core Maths

Algebra Expansion
- Expanding and factorising
- Changing the subject
- Functions

Algebra Expansion

Revision and Communication
- Transformations
- Constructions
- Listing and describing
- Exam technique
- Show that…

Expressions
- Manipulating expressions
- Algebraic fractions

Delving into Data
- Collecting, representing and interpreting data

Proportions and Proportional Change
- Ratio and fractions
- Percentages and interest
- Probability

Geometry
- Angles and bearings
- Working with circles
- Vectors

Graphs

YEAR 11

Expressions   **Using Number**   **Delving into Data**   **Proportions and Proportional Change**   Geometry   Developing Algebra   Similarity   Algebraic Representations

Graphs
- Gradients and lines
- Non-linear graphs
- Using graphs

Using Number
- Non-calculator methods
- Types of number sequences
- Indices and roots

Developing Algebra
- Representing solutions of equations and inequalities.
- Simultaneous equations

Similarity
- Congruence, similarity and enlargement
- Trigonometry

Algebraic Representations
- Solving problems using graphs, tables, probability and algebra

Reasoning with Data
- The data handling cycle

Constructing in 2 and 3 dimensions
- Three dimensional shapes
- Congruency

Reasoning with Geometry
- Rotation and translations
- Pythagoras' Theorem

Reasoning with Data   **Reasoning with Algebra**   **Constructing in 2 and 3 dimensions**   **Reasoning with Numbers**   **Reasoning with Geometry**   **Reasoning with Proportion**

Reasoning with Algebra
- Straight line graphs
- Forming and solving equations

Reasoning with Numbers
- Maths and money

Reasoning with Proportion
- Enlargement and similarity
- Solving ratio and proportion problems
- Rates
- Probability

YEAR 10

YEAR 9

Developing Geometry
- Angles in parallel lines
- Angles in polygons
- Area of trapezia and circles
- Symmetry

Representations
- Working in the cartesian plane
- Representing data
- Tables and probability

Constructions
- Properties of two dimensional shapes.
- Constructions
- Loci

Developing Geometry   **Developing Numbers**   **Algebraic Techniques**   **Representations**   **Proportional Reasoning**   **Constructions**   Reasoning with Number

Developing Numbers
- Fractions and percentages
- Standard index form
- Number sense

Algebraic Techniques
- Brackets, equations and inequalities
- Sequences
- Indices

Proportional Reasoning
- Ratio and scale
- Multiplicative change
- Multiplying and dividing fractions

Application of Number
- Solving problems with addition and subtraction
- Multiplication and division
- Fractions and decimals of amounts

Directed Numbers
- Four operations with directed numbers

Reasoning with Number
- Developing number sense.
- Sets and probability
- Prime numbers and proof. (Y8)

YEAR 8

Application of Number   **Fractional Thinking**   **Directed Numbers**   **Lines and Angles**   **Reasoning with Number**

Fractional Thinking
- Addition and subtraction with fractions

Lines and Angles
- Constructing, measuring and using geometric notation.
- Developing geometric reasoning.

Place Value and Proportion
- Place value
- Ordering integers and decimals
- Fraction, decimal and percentage equivalence.

welcome

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Place Value and Proportion   **Algebraic Thinking**

YEAR 7

PRIMARY SCHOOL

Algebraic Thinking:
- Sequences
- Understand and use algebraic notation
- Equality and equivalence

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