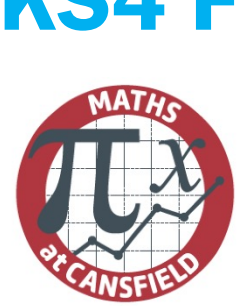
KS4 Foundation Roadmap



YEAR 10

- **Number**
  - Calculations
  - Decimals
  - Place value
  - Factors and multiples
  - Indices, powers and roots
- **Algebra**
  - Working with expressions
  - Formulae
  - Expanding and factorizing
  - Substitution
  - Rearranging formulae
- **Graphs, tables and charts**
  - Frequency tables
  - Two-way tables
  - Stem and leaf diagrams
  - Pie charts
  - Scatter graphs
- **Fractions and percentages**
  - Calculating with fractions
  - Mixed numbers
  - Fractions/Decimals/percentages
  - Working with percentages
- **Equations, inequalities and sequences**
  - Solving equations
  - Writing inequalities
  - Solving inequalities
  - Using formulae
  - Generating sequences
  - Finding the nth term
- **Angles**
  - Properties of shapes
  - Angles in parallel lines
  - Angles in triangles
  - Angles in polygons
- **Perimeter, area and volume**
  - Rectangles, triangles and parallelograms
  - Trapezia
  - Converting units of area and volume
  - Compound shapes
  - Surface area
  - Volume of prisms
- **Graphs**
  - Coordinates
  - Linear graphs
  - y = mx + c
  - Distance-time graphs
  - Real-life graphs
- **Transformations**
  - Translation
  - Reflection
  - Rotation
  - Enlargement
- **Ratio and proportion**
  - Writing and using ratios
  - Comparing using ratios
  - Proportion

YEAR 11

- **Right-angles triangles**
  - Pythagoras' theorem
  - Using the sine, cosine and tangent ratios
  - Finding missing sides and angles
- **Probability**
  - Calculating probability
  - Two events
  - Experimental probability
  - Venn diagrams
  - Tree diagrams
- **Multiplicative Reasoning**
  - Percentages
  - Growth and decay
  - Compound measures
  - Distance, speed, time
  - Direct and inverse proportion
- **Constructions, Loci and Bearings**
  - 3D solids
  - Plans and elevations
  - Accurate drawings
  - Scale drawings and maps
  - Constructions
  - Loci and regions
- **Quadratic Equations and Graphs**
  - Expanding double brackets
  - Plotting quadratic graphs
  - Using quadratic graphs
  - Factorising quadratic expressions
  - Solve quadratic equations algebraically
- **Perimeter, Area and Volume**
  - Circumference and area of circles
  - Semi circles an sectors
  - Compost shapes and cylinders
  - Pyramids and cones
  - Spheres and composite solids
- **Indices and Standard Form**
  - Laws of indices
  - Writing numbers in standard form
  - Calculating standard form
- **Congruence, Similarity and Vectors**
  - Similarity and enlargement
  - Using similarity
  - Congruence
  - Vectors
- **More Algebra**
  - Graphs of cubic and reciprocal functions
  - Non-linear graphs
  - Solve simultaneous equations graphically
  - Solving simultaneous equations algebraically
  - Rearranging formulae
  - Proof
- **Revision based on QLA**
- **EXAM**

KS4 Higher Roadmap