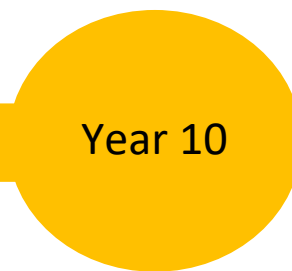
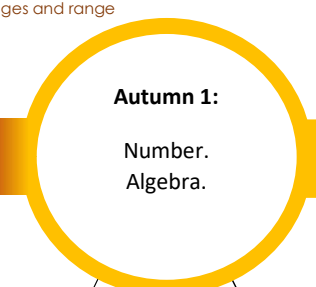
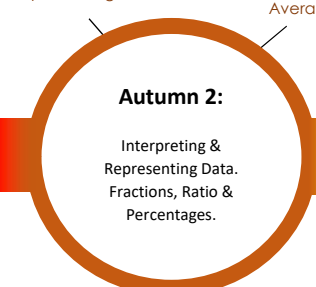
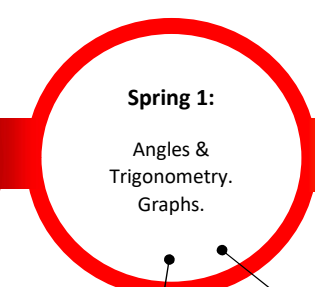
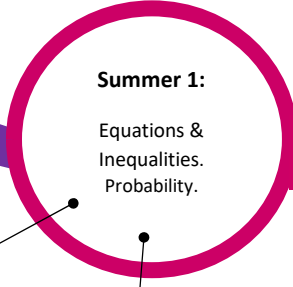
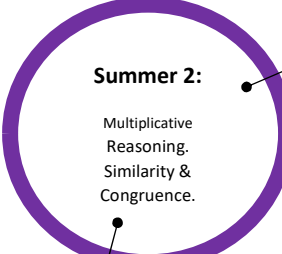
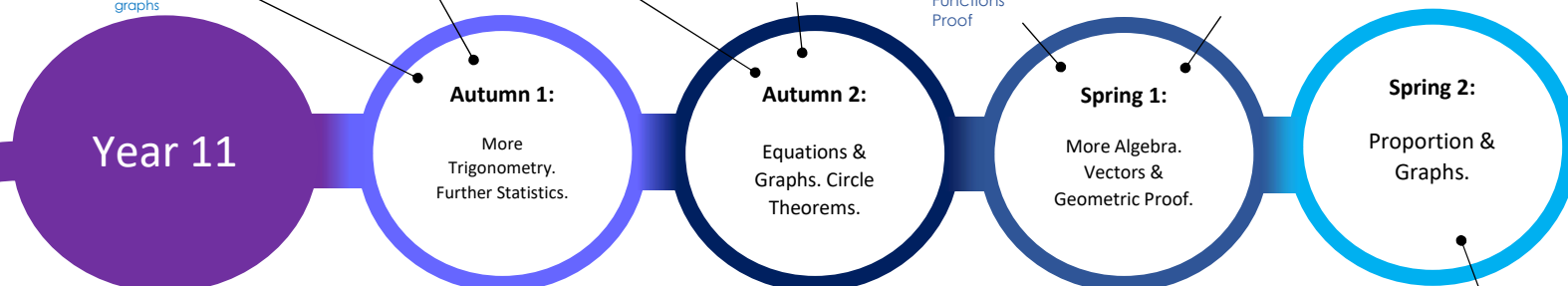
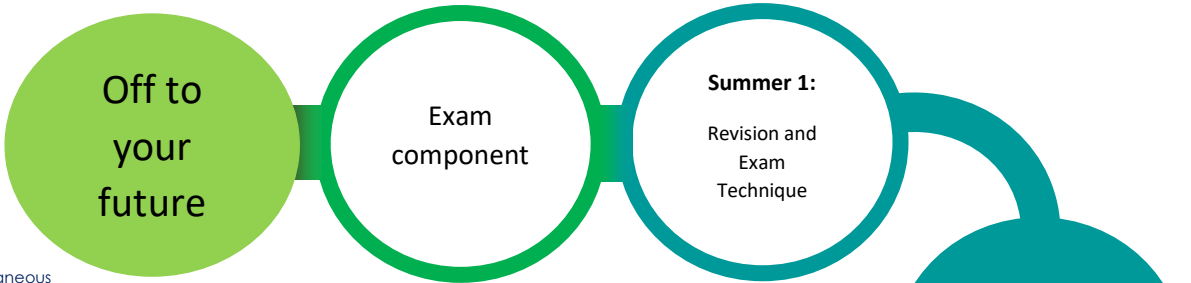


KS4 GCSE
Mathematics
 (Higher)
2-year curriculum map



Bounds calculations in trig
 Graph trigonometric functions
 Calculating areas and the sine rule
 The cosine rule
 Solving problems in 3D – Pythag + trig
 Transforming trigonometric graphs

Sampling (Random + stratified)
 Capture/recapture
 Cumulative frequency
 Box plots
 Drawing histograms
 Interpreting histograms
 Comparing and describing populations

Solving simultaneous equations graphically
 Representing inequalities graphically
 Graphs of quadratic functions
 Solving quadratic equations graphically
 Graphs of cubic functions

Radii and chords
 Tangents
 Angles in circles
 Applying circle theorems

Rearranging formulae
 Algebraic fractions
 Simplifying algebraic fractions
 More algebraic fractions
 Surds
 Solving algebraic fraction equations
 Functions
 Proof

Vectors and vector notation
 Vector arithmetic
 Parallel vectors and collinear points
 Solving geometric problems

Exams

Congruence
 Geometric proof and congruence
 Similarity
 Similarity in 3D solids

Multiplicative Reasoning, Similarity & Congruence.

Growth and decay
 Compound measures
 Ratio and proportion

Solving quadratic equations
 Completing the square
 Simultaneous equations
 Solving linear and quadratic simultaneous equations
 Solving linear inequalities

Combined events
 Mutually exclusive events
 Experimental probability
 Independent events and tree diagrams
 Conditional probability
 Venn diagrams and set notation

3D solids
 Reflection, rotation and enlargement
 Transformations and combinations of transformations
 Bearings and scale drawings
 Constructions
 Loci

Perimeter and area
 Units and accuracy
 Prisms
 Circles
 Sectors of circles
 Cylinders and spheres
 Pyramids and cones

Linear graphs (plotting, grad and find equation)
 $y = mx + c$
 Distance-time and velocity-time graphs (grads)
 Real-life graphs
 Line segments - mid pt and length
 Quadratic graphs
 Cubic and reciprocal graphs
 Graph of a circle

Angle properties of triangles and quadrilaterals
 Interior angles of a polygon
 Exterior angles of a polygon
 Pythagoras' theorem (2d)
 Trigonometry (2d)

Fractions
 Ratios
 Ratio and proportion
 Percentages
 Fractions, decimals and percentages

Statistical diagrams
 Time series
 Scatter graphs
 Line of best fit
 Averages and range

Direct proportion
 Inverse proportion
 Exponential functions
 Non-linear graphs
 Translating graphs of functions
 Reflecting and stretching graphs of functions

Algebraic indices
 Expanding and factorising
 Equations
 Formulae
 Linear sequences
 Non-linear sequences

Number problems and reasoning
 Place value and estimating
 HCF and LCM
 Calculating with powers (indices)
 Zero, negative and fractional inc
 Standard form
 Surds

