

# Mathematics

All students will sit a summative assessment at the end of each term to track progress – scores will be given as grades using exam grade boundaries.

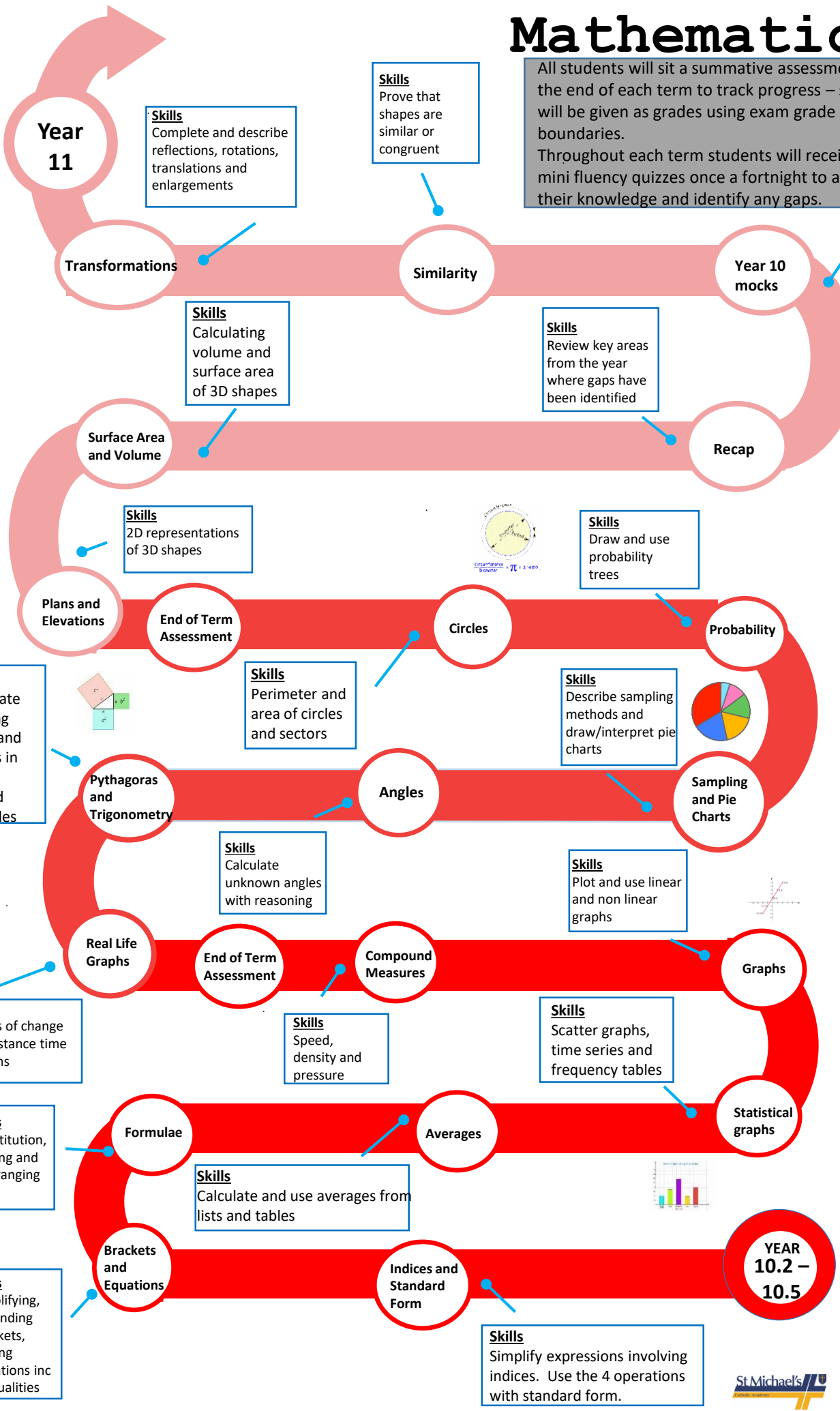
Throughout each term students will receive mini fluency quizzes once a fortnight to assess their knowledge and identify any gaps.

A full GCSE series – 3 papers (2 calc and 1 non calc).

By the end of term 3 students should be able to calculate the volume and surface area of spheres, cones and pyramids, fully describe any type of transformation and work with vectors

By the end of term 2 students should be able to apply trigonometry in two dimensions and interpret a gradient as a rate of change.

By the end of term 1 students should be able to expand and factorise brackets using this to solve equations, analyse data by calculating and comparing averages



**Year 11**

**Skills**  
Complete and describe reflections, rotations, translations and enlargements

**Skills**  
Prove that shapes are similar or congruent

**Transformations**

**Similarity**

**Year 10 mocks**

**Skills**  
Calculating volume and surface area of 3D shapes

**Skills**  
Review key areas from the year where gaps have been identified

**Surface Area and Volume**

**Recap**

**Skills**  
2D representations of 3D shapes

**Skills**  
Draw and use probability trees

**Plans and Elevations**

**End of Term Assessment**

**Circles**

**Probability**

**Skills**  
Calculate missing sides and angles in right angled triangles



**Skills**  
Perimeter and area of circles and sectors

**Skills**  
Describe sampling methods and draw/interpret pie charts



**Pythagoras and Trigonometry**

**Angles**

**Sampling and Pie Charts**

**Skills**  
Calculate unknown angles with reasoning

**Skills**  
Plot and use linear and non linear graphs



**Real Life Graphs**

**End of Term Assessment**

**Compound Measures**

**Graphs**

**Skills**  
Rates of change eg distance time graphs

**Skills**  
Speed, density and pressure

**Skills**  
Scatter graphs, time series and frequency tables

**Skills**  
Substitution, writing and rearranging

**Formulae**

**Averages**

**Statistical graphs**

**Skills**  
Calculate and use averages from lists and tables



**Skills**  
Simplifying, expanding brackets, solving equations and inequalities

**Brackets and Equations**

**Indices and Standard Form**

**Skills**  
Simplify expressions involving indices. Use the 4 operations with standard form.

**YEAR 10.2 - 10.5**