



Curriculum Overview

Curriculum Area: Mathematics

Year: 10

This Curriculum Overview is a transition model as we move through our new Curriculum Map

Autumn Term

Higher Topics:

Unit 8/Unit 9/Unit 11: 3D solids, the 4 transformations, bearings and scale drawings, constructions, and loci. Solving quadratic equations by factorising, using the formula, and completing the square. Solving linear and quadratic simultaneous equations. Solving linear inequalities. Growth and decay in context, compound measures, ratio, and proportion.

Foundation Topics:

Unit 8/Unit 9/Unit 10: Areas of basic 2D shapes and compound shapes. Surface area of 3D solids and volumes of prisms. Coordinates, plotting linear graphs, understanding $y=mx+c$. Distance-time graphs and other real-life graphs. Reflections, rotations, transformations, and enlargements. Combining transformations.

Spring Term

Higher Topics:

Unit 10/Unit 12/Unit 16: Combined and mutually exclusive events. Experimental probability. Independent events and tree diagrams. Conditional probability. Venn diagrams and set notation. Congruence and geometric proof. Similarity in 2D shapes and 3D solids. Radii and chords, tangents, and angles in circles.

Foundation Topics:

Unit 11/Unit 12/Unit 13: Writing and using ratios, comparing using ratios. Using proportion and problem solving with graphs. Pythagoras' Theorem. Trigonometry using the sin, cos and tan ratios. Calculating probability for one or two events. Experimental probability, Venn diagrams and tree diagrams.

Summer Term

Higher Topics:

Unit 15/Unit 13: Solving simultaneous equations graphically, representing inequalities graphically. Graphs of quadratic and cubic functions. Trigonometric graphs. Using the sine and cosine rule, areas of non-right-angled triangles. Solving problems in 3D. Transforming trigonometric graphs.

Foundation Topics:

Unit 14/Unit 15/Unit 16: Percentages, growth and decay. Compound measures. Speed, distance, time and direct and inverse proportion. 3D solids, plans and elevations. Scale drawings, constructions, bearings and loci. Expanding double brackets, plotting and using quadratic graphs. Factorising expressions, solving quadratic equations algebraically.

Internal Assessment

Class work is assessed during the lesson. Pupils self-assess their work in green pen, ensuring that misconceptions are captured, and progress is continuous. Teachers circulate the room, facilitate discussions, and use mini whiteboards and directed questions to assess progress and re-shape the learning where misconceptions occur.

The GCSE course is taught in units. Each curriculum unit is followed by an assessment. This demonstrates retention of core knowledge and the ability to apply this to exam questions.

All pupils will sit two more formal assessments containing GCSE questions related to the content that has been studied in class. These take place in February and June.

Exam Board/Exam Paper Requirements/% Weighting

Key dates

We study the Edexcel GCSE Mathematics (9-1) course at either Higher or Foundation Tier. Course code is 1MA1.

All final examinations are taken at the end of year 11.

The exam consists of 3 papers (90 minutes each) which all have equal weighting (33.3%) and combine to give a GCSE grade.

Paper 1H is a non-calculator paper and papers 2H and 3H are calculator.

Any part of the specification can be tested on any paper.

Helpful resources/revision guides/websites/exam preparation

The best way to revise maths is to do maths. Further practice outside of lesson time is vital for success. Pupils should work through questions/examples from their exercise books, attempt practice GCSE questions and watch the mathswatch tutorial videos, pausing and going back when they need to.

Along with being given a personal mathswatch login, pupils can purchase CGP 9-1 maths revision guides at the start of the year at a reduced price of £3.30 through Parent pay (rrp £5.95).

Revision lists are produced for formal assessments and include links to mathswatch tutorial videos.

Pupils are required to have their own scientific calculator (Casio fx-83GT X). These are widely available and are also available to purchase through parent pay for £10.

Recommended websites include:

Mathsgenie/onmaths/Corrbettmaths/BBC bite size/YouTube.

There is also an array of excellent support materials on the Edexcel website, such as exam specifications and past papers.