

Y11F ROADMAP - Mathematics

Subject Aim: The Year 11 Foundation Maths curriculum aims to consolidate and strengthen students' understanding of key concepts essential for success at GCSE Foundation level. It focuses on building confidence and fluency through personalised practice and supports the development of problem-solving skills and real-life applications, preparing students effectively for their exams and future challenges.

TERM 1	Students will apply angle facts to polygons, parallel lines, bearings and geometric problems. They will then interpret and construct statistical graphs and diagrams, including scatter graphs, frequency polygons and time series. Finally, students will develop vector notation and use vectors to describe geometric relationships. These units strengthen connections across geometry and statistics and prepare students for further Year 11 study and GCSE questions involving geometric reasoning, data interpretation and multi-step problem solving.
TERM 2	Students will revisit factors, powers and roots, developing their understanding of surds and exact values. They will then apply Pythagoras' theorem and trigonometry to calculate missing sides and angles in right-angled triangles. Finally, students will consolidate ratio and proportion before solving problems involving direct and inverse relationships. These units strengthen numerical, geometric and proportional reasoning and prepare students for GCSE questions involving exact calculations, scale factors, compound measures and multi-step problem solving.
TERM 3	Students will extend their understanding of area and volume to solve problems involving compound shapes, prisms, cylinders and other 3D solids. They will then explore similarity and congruence, using scale factors to compare corresponding lengths, areas and volumes and justify whether shapes are similar or congruent. These units strengthen connections across geometry and proportion and prepare students for GCSE questions involving scale drawings, geometric reasoning, compound measures and multi-step problem solving.
TERM 4	Students will extend their understanding of sequences by finding term-to-term and position-to-term rules and using algebra to justify results. They will then revisit standard form, calculating with very large and small numbers. Finally, students will develop their work with circles, including circumference, area, arcs and sectors. These units strengthen algebraic and numerical reasoning and prepare students for GCSE questions involving pattern generalisation, scientific notation, exact calculations and complex mensuration problems.
TERM 5	Students will develop understanding of functions and graphs, connecting equations to different representations. They will then consolidate solving equations and rearranging formulae before applying proportional reasoning to speed, density and pressure. Finally, students will revisit rotations, reflections, translations and enlargements. These units strengthen algebraic and geometric reasoning and prepare students for GCSE questions involving graphical interpretation, compound measures, formulae and transformations.
TERM 6	Students will continue to revise and practise exam-style problems, preparing thoroughly before sitting the remaining GCSE papers.



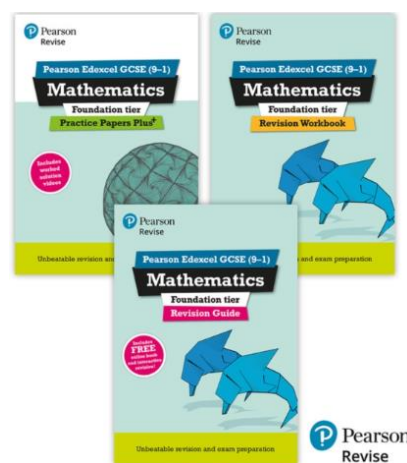
ASSESSMENT

All lessons will assess understanding through a range of activities, including diagnostic questions, mini whiteboard tasks, and find-and-fix activities. Lessons are regularly punctuated with hinge questions, key statements, and opportunities for discussion. PPE exams will take place in November and February.



INDEPENDENT LEARNING

Knowledge Organisers are expected to be used weekly to support the learning and recap of key vocabulary as the course progresses. Sparx Maths will be used as an online resource to aid independent learning. Recommended revision guides are below.



ENRICHMENT

- Maths challenge activities.
- Maths' relays allowing opportunity for problem solving.
- Term 5 well-being and revision trip to Playzone Lincoln

What Next? You should work independently to address gaps identified by your teacher while completing revision activities during lessons. This may include using practice papers, Sparx Maths, and Question Level Analyses (QLAs) to support your learning.