

# Y11 ROADMAP - MATHEMATICS

**Subject Aim:** The aim of Maths for Year 11 is to allow students to become fluent in the fundamentals of mathematics, reason mathematically by conjecturing relationships and solve problems by applying their mathematics to a variety of routine and non-routine problems, encouraging independence and more resilience in their way of working. This year's topics build on previous units whilst preparing students for the more advanced GCSE topics.

TERM 1	<p><b>Can algebra be used to find the area of a room?</b></p> <p>The first unit of maths this year considers the more advanced algebra topics including simultaneous equations and quadratics. Students will apply the skills learnt to more complex multi-step problems. The second unit this year retrieves knowledge of standard form. Students will then go onto apply this knowledge to calculations involving standard form and solve multi-step problems.</p>
TERM 2	<p><b>Can algebra be used to represent real-life scenarios?</b></p> <p>Students will plot and interpret more advanced graphs including those from quadratic and cubic functions. Students will use graphs to represent real-life scenarios before interpreting results. This term also allows for revision before student Mock exams. Students will sit 3 papers as a full formal assessment.</p>
TERM 3	<p><b>How do vectors represent direction?</b></p> <p>In this unit, students will explore vectors and how they are used to represent direction. Students will calculate using vectors and apply this knowledge to solve multi-step problems. Students will be given opportunity to practise exam style papers as part of the revision process.</p>
TERM 4	<p><b>Can you respond to feedback to make progress?</b></p> <p>This term will be used for revision and retrieval of previous knowledge. You will be expected to work more independently to solve problems. You will be given regular feedback and will be given opportunity to practise exam questions and papers.</p>
TERM 5	<p><b>Can you respond to feedback to make progress?</b></p> <p>This term will be used for revision and retrieval of previous knowledge. You will be expected to work more independently and be proactive at seeking advice. You will be given regular feedback and will be given opportunity to practise exam questions and papers before the exam at the end of this term before sitting the first GCSE paper before the end of term.</p>
TERM 6	<p><b>Can you respond to feedback to make progress?</b></p> <p>Students will continue to revise and practise exam style problems before sitting the remainder of the GCSE papers.</p>



## ASSESSMENT

- Most lessons will test student knowledge using a variety of activities including diagnostic questions, find and fix and GCSE style problems.
- Each and every lesson will be punctuated by various hinge questions, statements and discussion opportunities.
- For each unit, students will be given a short Mini-Assessment assessing their understanding of the key vocabulary, knowledge and concepts.
- Each term will also contain a longer assessment with a series of questions providing students with an opportunity to explain and justify answers.



## INDEPENDENT LEARNING

- Knowledge Organisers are expected to be used weekly to support the learning and recap of key vocabulary as the course progresses.
- There will be various independent learning challenges set each half-term which will allow students to develop their subject specialist skills as well as knowledge and understanding.
- There will be opportunities to practice crucial retrieval and revision skills with various resources and templates provided.
- Sparx Maths will be used as an online resource to aid independent learning.



## ENRICHMENT

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

**What Next?** You should work independently to fill gaps identified by your teacher alongside completing revision activities within the lesson. This can include use of practice papers, MyMaths and revision grids.