

Curriculum Intent, Implementation and Impact

Subject : GCSE Further Mathematics – AQA

Year group: Year 11

Lessons per fortnight: 8 (taught to identified students ready to add to their GCSE Maths)

INTENT:

Courses based on the AQA Further Maths specification should encourage students to be inspired and challenged by following a rigorous and satisfying course of study which emphasises the power of mathematics. Students should be encouraged to reason logically and recognise incorrect reasoning, and to appreciate the power of generalisation and mathematical proof. They should be encouraged to see algebra as a natural tool for communicating mathematically and for solving a range of problems. They should begin to appreciate how situations can be represented by mathematical models and to consider the assumptions made and limitations of mathematical models. They should see mathematics as a coherent subject and understand how different areas of the subject link together. They should be encouraged to appreciate the elegance and beauty of mathematics for its own sake as well as beginning to realise its fundamental importance in understanding and shaping our world.

Courses based on this specification must enable candidates to:

1. develop knowledge, skills and understanding of higher order mathematical methods and concepts
2. acquire and use problem solving strategies including the use of algebra as a tool for solving problems
3. select, apply and link mathematical techniques and methods to solve challenging and non-routine problems
4. reason mathematically, make deductions and inferences and draw conclusions
5. interpret and communicate mathematical information in a variety of forms appropriate to the information and context including rigorous use of algebraic argument and formal proof.

IMPLEMENTATION:

Term	Topics studied Add dates and any assessments included	Extended learning opportunities (homework, controlled assessments, field work, trips etc.)	How parents could support students
5	<ol style="list-style-type: none"> 1. Number 2. Algebra 3. Coordinate geometry 4. Calculus 5. Matrix transformations 6. Geometry 	<p>Google classroom - With extended learning opportunities such as Dr.Frost.</p> <p>Summative assessment once a term covering all previous topics with a mock at the end of the term to ensure students are ready to face the final.</p>	<p>Engage with Dr.Frost with their child</p> <p>Ensure that all homework is cross referenced and completed on google classroom</p> <p>Encourage and help their child to remember key terms</p> <p>Ensure that their child is working through the</p>

As much of the GCSE Further Maths course overlaps with the GCSE Maths, students will be given tuition in their usual lessons twice a week for the new content. Content already previously covered with more problem solving will have resources loaded onto Google Classroom for students to cover in independent time. Lunch tutor sessions will be made available for those who need extra support.

IMPACT:

The course is designed to stretch and challenge our top achievers to give a boost to the start of the A level Maths course and give some extra knowledge to those considering A level Further Maths. Students will learn to work more independently which will aid them in their A level studies and beyond.

Ultimately, at the end of their time with us, students will be able to think independently and process their thoughts in a logical and sequential way, hence enhancing any future decision making and judgements.