

Subject: <b>Mathematics</b>		Year Group: <b>13</b>
<b>Term 1 Key Focus/Topic(s)</b> <ul style="list-style-type: none"> <li>• PU1 – Proof</li> <li>• PU2 – Algebraic &amp; Partial Fractions</li> <li>• PU3 – Functions &amp; Modelling</li> <li>• PU4 – Series &amp; Sequences</li> <li>• SU1 – Regression &amp; Correlation</li> <li>• MU4 – Moments</li> <li>• MU5 – Forces at Any Angle</li> </ul>	<b>Term 2 Key Focus/Topic(s)</b> <ul style="list-style-type: none"> <li>• PU5 – The Binomial Theorem</li> <li>• PU6 – Trigonometry</li> <li>• PU7 – Parametric Equations</li> <li>• SU2 – Probability</li> <li>• MU6 – Applications of Kinematics</li> <li>• MU7 – Applications of Forces</li> </ul>	<b>Term 3 Key Focus/Topic(s)</b> <ul style="list-style-type: none"> <li>• Revision for mock examinations</li> <li>• Mock examinations</li> <li>• PU8 – Differentiation</li> <li>• PU9 – Numerical Methods</li> <li>• MU7 – Applications of Forces (cont.)</li> <li>• SU3 – The Normal Distribution</li> </ul>
<b>Term 1 Assessment Opportunities:</b> <ul style="list-style-type: none"> <li>• A2 PU1 Test</li> <li>• A2 PU2 Test</li> <li>• A2 PU3 Test</li> <li>• A2 PU4 Test</li> <li>• A2 SU1 Test</li> <li>• A2 MU4 Test</li> <li>• A2 MU5 Test</li> </ul>	<b>Term 2 Assessment Opportunities:</b> <ul style="list-style-type: none"> <li>• A2 PU5 Test</li> <li>• A2 PU6 Test</li> <li>• A2 PU7 Test</li> <li>• A2 SU2 Test</li> <li>• A2 MU6 Test</li> </ul>	<b>Term 3 Assessment Opportunities:</b> <ul style="list-style-type: none"> <li>• Mock examinations</li> <li>• A2 PU8 Test</li> <li>• A2 PU9 Test</li> <li>• A2 MU7 Test</li> </ul>
<b>Term 4 Key Focus/Topic(s)</b> <ul style="list-style-type: none"> <li>• PU10 – Integration (part 1)</li> <li>• PU11 – Integration (part 2)</li> <li>• PU12 – Vectors (3D)</li> <li>• SU3 – The Normal Distribution (<i>cont.</i>)</li> <li>• MU8 – Further Kinematics</li> </ul>	<b>Term 5 Key Focus/Topic(s)</b> <ul style="list-style-type: none"> <li>• Revision</li> </ul>	<b>Term 6 Key Focus/Topic(s)</b> <ul style="list-style-type: none"> <li>• Revision</li> </ul>
<b>Term 4 Assessment Opportunities:</b> <ul style="list-style-type: none"> <li>• A2 PU10 Test</li> <li>• A2 PU11 Test</li> <li>• A2 PU12 Test</li> <li>• A2 SU3 Test</li> <li>• A2 MU8 Test</li> </ul>	<b>Term 5 Assessment Opportunities:</b> <ul style="list-style-type: none"> <li>• Past paper practice</li> </ul>	<b>Term 6 Assessment Opportunities:</b> <ul style="list-style-type: none"> <li>• Final examinations</li> </ul>

**Aims and objectives:**

- Understand mathematics and mathematical processes in a way that promotes confidence, fosters enjoyment and provides a strong foundation for progress to further study
- Extend the students' range of mathematical skills and techniques
- Apply mathematics in other fields of study and be aware of the relevance of mathematics to the world of work and to situations in society in general
- Use their mathematical knowledge to make logical and reasoned decisions in solving problems using a suitable strategy, modelling, drawing diagrams and sketching graphs to explore mathematical situations and where appropriate interpret solutions and make conclusions in context by using mathematical reasoning and communicating this effectively
- Reason logically and recognise incorrect reasoning
- Construct mathematical proofs
- Use technology such as calculators and computers effectively
- Take increasing responsibility for their own learning and the evaluation of their own mathematical development.

**Rationale:**

The overarching themes are:

- Mathematical argument, language and proof
- Mathematical problem solving
- Mathematical modelling

These are to be applied along with associated mathematical thinking and understanding, across the whole of the detailed content in the specification. These overarching themes are inherent throughout the content and students are required to develop skills in working scientifically over the course of the qualification. The skills show teachers which skills need to be included as part of the learning and assessment of the students.

**Evaluation:**

- Students are expected to self-assess all independent work and aim to correct any errors before submission. Teachers are expected to oversee the pupils' assessment and give guidance/constructive feedback as to how to improve future performance and correct any misconceptions. This should be carried out at least once every fortnight and in line with the school policy.
- End of topic tests are to be done under exam conditions, teacher assessed and marks entered onto the appropriate departmental Google Doc for comparisons, quality assurance that groups are progressing in tandem and as expected and can be monitored by the Head of Department. Periodically, moderation of marking takes place during departmental meetings which further enhances the quality assurance that mark schemes are being applied consistently.
- Opportunities for teacher feedback can be from individual conversations regarding independent work and end of topic tests. With regard to end of topic tests teachers are to feedback using WWW and EBI with students adding their MRI in response.

**Assessment:**

This qualification consists of three 2 hour written examinations of equal weighting:

- Pure Mathematics Paper 1
- Pure Mathematics Paper 2
- Statistics and Mechanics Paper