

# **Subject Curriculum Map: Year 11 Higher Updated June 2024**

**Exam Board: Edexcel – 100% terminal Examination**

Our Intent in Mathematics

**Results - Passion for Maths – Wider Learners – Cultural Capital - High-Quality Teaching – Success**

Throughout their education at Alleynes, we intend to deliver high-quality, rigorous and engaging Maths lessons, which not only ensure that students are prepared for external examinations, but also leave school with proficient Maths skills to be equipped for modern life. We want to instil a love of Maths, at every level, and encourage students to continue their Mathematical education to the highest level, where appropriate. We also aim to give students a breadth of opportunities to develop their knowledge further outside of the classroom by coming to Maths club, attending trips, speeches and competitions across a range of topics and abilities.

Our Implementation of the Curriculum

**Starter – Quality of Delivery – Assessment – Homework – Recap and Retrieval**

In our Maths department, we pride ourselves on a well-structured delivery of the curriculum. We start all lessons with a consistent starter with the clear objective of recap and retrieval. The lessons consist of high-quality teaching from experienced and dedicated teachers, followed by rigorous practise and assessment. Monitoring tests are set 4 times a year to ensure that we can monitor progress accurately. This allows teachers to address and misconceptions and reteach and gaps. Students receive quality exam-practice, and are set to ensure teaching at the correct level. Assessed homework it set every 4 weeks. This provides us another opportunity for recap and retrieval, as well as monitoring progress on the most recent topics.

The Impact of our Curriculum

**Results – Aspiration – Positive Feedback – Success**

Our curriculum delivers consistently good GCSE and A Level results, above the national average. It has helped the department to achieve an increase in A Level numbers in the past 2 years, alongside launching a successful Level 2 Further Maths qualification. We believe that students enjoy Maths, and thrive on the consistency and challenge we provide. Internal monitoring, such as student voice, book scrutiny and lesson observations all reflect this view.

| Year 11  | Autumn 1  | Autumn 2   | Spring 1  | Spring 2   | Summer 1   |
|--|---|--|---|--|--|
| <b>Themes, Concepts &amp; Ideas</b>                | SSM/Algebra   | SSM/Algebra  | Topics revisited based on group weaknesses  | Target grade 5,7,9 topics  | Exams  |
| <b>Unit</b>  | Unit 16 and 17  | 18 and 19  | Revisit topics that students struggled with in Mock exams   | Use contents page topics as a guide  |  |
| <b>Knowledge and understanding</b>                 | <u>Circle Theorems</u> : Radii and chords, tangents, Angles in circles, Applying circle Theorems.<br><u>More Algebra</u> : Rearranging Formulae, Algebraic Fractions, Simplifying algebraic fractions, more algebraic fractions, surds, solving algebraic fraction equations, functions, proof. | <u>Vectors and Geometric proof</u> : Vectors and vector notation, vector arithmetic, more vector arithmetic, parallel vectors and collinear points, solving geometric problems.<br><u>Proportion and graphs</u> : Direct proportion, more direct proportion, inverse proportion, exponential functions, non linear graphs, translating graphs of functions, reflecting and stretching graphs of functions. | Students spend this half term revisiting topics that they have found challenging based on analysis of mock exams, on a group by group basis                               | Differentiated lessons based on current WAG and capacity for improvement following topics suggested by target 5,7,9 work books   |  |
| <b>Subject specific skills</b>                     | Build on knowledge of angles. E.g. angles in triangles, etc. To label all parts of a circle.<br>Factorisation, solving equations, simplifying fractions, common denominators.   | Vectors and translations.<br>Investigation and advanced problem solving.<br>Plotting straight line graphs, recognising graphs, substitution, solving equations.  | Build on prior knowledge and <b>improve</b> understanding of topics that were not well answered in the mock exams   | Students work on a variety of topics with teacher support, this type of learning encourages independence and helps students prepare for A level, further study or the world of work. |  |
| <b>1.SMSC</b>                                      | Develop the ability to reflect<br>Draw conclusions based on Evidence<br>Develop the ability to reflect<br>Show persistence<br>Appreciate the Heights of Human Achievement   | Develop the ability to reflect<br>Draw conclusions based on Evidence<br>Develop the ability to reflect<br>Show persistence<br>Appreciate the Heights of Human Achievement  | Develop the ability to reflect<br>Draw conclusions based on Evidence<br>Develop the ability to reflect<br>Show persistence<br>Appreciate the Heights of Human Achievement | Develop the ability to reflect<br>Develop the ability to reflect<br>Show persistence   | Develop the ability to reflect<br>Show persistence<br>Appreciate the Heights of Human Achievement  |
| <b>2.Skills For life</b>                           | Independence<br>Creativity<br>Problem Solving<br>Numeracy<br>Independence<br>Teamwork   | Independence<br>Creativity<br>Problem Solving<br>Numeracy<br>Independence<br>Teamwork  | Independence<br>Problem Solving<br>Numeracy<br>Teamwork   | Independence<br>Problem Solving<br>Numeracy<br>Teamwork  | Independence<br>Problem Solving<br>Numeracy<br>Teamwork  |
| <b>3.FBV</b>                                       | Mutual Respect  | Mutual Respect   | Mutual Respect<br><b>Use/Misuse of Statistics</b>   | Mutual Respect<br><b>Use/Misuse of Statistics</b>  |  |
| <b>Stretch &amp; challenge</b>                     | Extend activity   | Extend activity  | Extend activity   | Extend activity  |  |
| <b>Key assessment focus, suggested assessments</b> | Check Up<br><br>End of Unit Test<br><br>½ termly test   | Check Up<br><br>End of Unit Test<br><br>½ termly test  | ½ termly test   | ½ termly test  |  |
| <b>Special events</b>                              |   |  |   |  |  |
| <b>Visits/extra curricular</b>                     |   |  |   |  |  |
| <b>Homework/Independent Learning</b>               | Weekly to consolidate learning<br>4 Weekly assessed homework to consolidate knowledge, understanding and skills<br>SAM Learning<br>Corbett Maths  | Weekly to consolidate learning<br>4 Weekly assessed homework to consolidate knowledge, understanding and skills<br>SAM Learning<br>Corbett Maths   | Weekly to consolidate learning<br>4 Weekly assessed homework to consolidate knowledge, understanding and skills<br>SAM Learning<br>Corbett Maths                          | Weekly to consolidate learning<br>4 Weekly assessed homework to consolidate knowledge, understanding and skills<br>SAM Learning<br>Corbett Maths                                     | Weekly to consolidate learning<br>4 Weekly assessed homework to consolidate knowledge, understanding and skills<br>SAM Learning<br>Corbett Maths |

Revisit Opportunity 9: Units 13-16 Retrieval

Revision Opportunity: Mocks

Revisit Opportunity 10: Units 15-19

Revision Opportunity: Mocks