Subject Curriculum Map: Year 10 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 10	Autumn 1	Revisit Opportunity 5: Units 6-8	Autumn 2	Revisit Opportunity 6: Units 8-10	Spring 1	Revision Opportunity: Mocks	Spring 2	Revision Opportunity: Mocks	Summer 1	Revisit Opportunity 7: Units 10-13	Summer 2	Revisit Opportunity 8: Units 11-14
Themes, Concepts & Ideas	SSM/Algebra		Statistics/Number		SSM		SSM		Statistics		Algebra	
Unit	Revisit 8 and 9		10 and 11		12		13		14		15	
Knowledge and understanding	Revisit Transformations: reflection, translation, rotation, enlargement. Constructions, Loci and Bearings. Equations and Inequalities: Quadratic equations. Simultaneous equations. Solving linear inequalities.		Probability: mutually exclusive events, independent events, conditional events, experimental probability, Venn diagrams. Multiplicative reasoning: growth and decay, compound measures, ratio and proportion.		Similarity and Congruence: Congruence, proofs, similarity, area and volume. .		More Trigonometry: Sin Cos Tan functions, Areas and sine rule, cosine rule, 2D and 3D problems. Transforming trig graphs		Further Statistics: Sampling, cumulative frequency, Box Plots, Histograms, Comparing data.		Equations and graphs: Simultaneous equations graphically, Inequalities graphically, quadratic and cubic functions.	
Subject specific skills	Use of protractor and compass. Solve equations. Substitution. Quadratics. Use of calculator. Recall key formulae.		Fra – Dec – Per. Understanding of appropriate terminology E.G. independent and conditional. Use of correct notation for Venn diagrams. % and % change. Knowledge of key formulae: Speed distance time. Density mass volume. Pressure force area. Substitution. Rearranging formulae. Solving equations.		Understand key terminology. E.G. congruent and scale factor. Recall key formulae.		Build on prior knowledge of SOH CAH TOA.		Representing data. Draw axis with appropriate scale. Interpret and compare data. Prior knowledge and use of averages: mean, median, mode and range.		To plot and sketch a variety of graphs. Use graphs to solve equations. Substitution. Expanding single, double and triple brackets. Factorisation	
1.SMSC	Explore patterns/relationships Appreciate the intangible Benefit from Advice Use logical reasoning		Draw conclusions based on Evidence Develop the ability to reflect Use logical reasoning Benefit from advice Show persistence		Develop the ability to reflect Appreciate the Role of Mathematics Benefit from Advice		Develop the ability to reflect Show persistence Appreciate the Role of Mathematics		Draw conclusions based on Evidence Appreciate the Role of Mathematics Show persistence		Show persistence Benefit from Advice Develop the ability to reflect Use logical reasoning	

2.Skills For life / Careers	Problem Solving Independence Empathy Leadership Harbour Master Ordinance Surveyor Engineering Route Planner in logistics	Independence Creativity Problem Solving Numeracy Independence Teamwork Book Maker Meteorologist Climate Scientist Epidemiologist	Problem Solving Numeracy Independence Carpet Fitter Tiler Events Catering	Independence Creativity Problem Solving Graphic Design Architect	Problem Solving Independence Empathy Leadership Market Researcher ONS administrator Data Analyst Scientist	Problem Solving Numeracy Independence Teacher Supermarket Buyer Cost Analyst
3.FBV	Mutual Respect	Mutual Respect Use/Misuse of Statistics	Mutual Respect	Mutual Respect	Mutual Respect Use/Misuse of Statistics	Mutual Respect
Stretch & challenge	Extend activity	Extend activity	Extend activity	Extend activity	Extend activity	Extend activity
Key assessment focus, suggested assessments	Check Up End of Unit Test ½ termly test	Check Up End of Unit Test ½ termly test	Check Up End of Unit Test ½ termly test	Check Up End of Unit Test ½ termly test	Check Up End of Unit Test ½ termly test	Check Up End of Unit Test ½ termly test
Special events						
Visits/extra curricular						
Homework/Independent Learning	Weekly to consolidate learning 4 Weekly assessed homework to consolidate knowledge, understanding and skills SAM Learning Corbett Maths	Weekly to consolidate learning 4 Weekly assessed homework to consolidate knowledge, understanding and skills SAM Learning Corbett Maths	Weekly to consolidate learning 4 Weekly assessed homework to consolidate knowledge, understanding and skills SAM Learning Corbett Maths	Weekly to consolidate learning 4 Weekly assessed homework to consolidate knowledge, understanding and skills SAM Learning Corbett Maths	Weekly to consolidate learning 4 Weekly assessed homework to consolidate knowledge, understanding and skills SAM Learning Corbett Maths	Weekly to consolidate learning 4 Weekly assessed homework to consolidate knowledge, understanding and skills SAM Learning Corbett Maths