

Key Stage 3

Subject: Mathematics

Intent

The Mathematics Department at The Frances Bardsley Academy for Girls wish to provide mathematics education that will encourage the girls to become accurate, efficient, and flexible problem solvers. Rapidly changing technological advances have created a fluid and dynamic world for this generation of students and it is difficult to predict and plan for the problems that our girls will need to solve when they enter the world of work. Therefore, we must ensure that the girls have the core knowledge, and the skills to apply to a variety of situations that are known and unknown to all of us at this time.

Our curriculum is cyclic in nature in that topics are taught at Key Stage 3 and revisited then enhanced as the students move into Key Stage 4. Across all key stages, we teach a knowledge-based curriculum which is integral to students being successful in Mathematics. We use technology to support our students' learning; we subscribe to Mathswatch and MyMaths which give students immediate access to online videos and tutorials and practice questions. Other resources are free of charge and we recommend these to our students as we go through the years (e.g., Corbett Maths, Maths Genie etc).

Programme of study and assessment

	Autumn Term	Spring Term	Summer Term
Year 7	<ul style="list-style-type: none">• Whole numbers & decimals• Perimeter & area• Whole numbers & decimal calculations• Properties of numbers	<ul style="list-style-type: none">• Angles & 2D shape• Fractions, decimals & percentages• Expressions & formulae	<ul style="list-style-type: none">• Averages & charts• Transformations & symmetry• Equations
Assessment	<ul style="list-style-type: none">• Assessments are completed after each unit of work.• The students receive a mid-unit homework which is used to inform them & their teacher of any initial problems.	<ul style="list-style-type: none">• Assessments are used to test students' recall of the key concepts and their ability to use these ideas to solve problems.• The students RAG their work before and after the assessment.• Questions are a mixture of fact-based questions and problem-solving questions.	<ul style="list-style-type: none">• After the run-through of the assessment the students complete a DIRT activity to show improvements that have been made post-assessment.• In the summer term, the students sit their end-of-year assessment. This is used alongside all the other data obtained throughout the year to set the students for the next academic year.

Year 8	<ul style="list-style-type: none"> • Rounding, indices & standard index form • Negative numbers, expressions & formulae • Averages & scatter diagrams • Solving equations 	<ul style="list-style-type: none"> • Ratio & proportion • Sequences & equation of a line • Constructions & scale drawing 	<ul style="list-style-type: none"> • Probability • Circles & compound shapes • Percentages • Transformations
Assessment	<ul style="list-style-type: none"> • Assessments are completed after each unit of work. • The students receive a mid-unit homework which is used to inform them & their teacher of any initial problems. 	<ul style="list-style-type: none"> • Assessments are used to test students' recall of the key concepts and their ability to use these ideas to solve problems. • The students RAG their work before and after the assessment. • Questions are a mixture of fact-based questions and problem-solving questions. 	<ul style="list-style-type: none"> • After the run-through of the assessment the students complete a DIRT activity to show improvements that have been made post-assessment. • In the summer term, the students sit their end-of-year assessment. This is used alongside all the other data obtained throughout the year to set the students for the next academic year.
Year 9	<ul style="list-style-type: none"> • Basic number • Fractions • Foundations in algebra 	<ul style="list-style-type: none"> • Perimeter, area & volume • Displaying data & averages 	<ul style="list-style-type: none"> • Ratio & proportion • Transformations • Angles
Assessment	<ul style="list-style-type: none"> • Assessments are completed after each unit of work. • In year 9, we introduce the students to cumulative testing. • Before every assessment the students are given a topic list to give focus to their revision. • All assessments test the unit of work that has just been taught and a variety of questions from earlier units. 	<ul style="list-style-type: none"> • Assessments are used to test students' recall of the key concepts and their ability to use these ideas to solve problems. • Questions are a mixture of fact-based questions and problem-solving questions. • In year 9, we begin to increase our emphasis on examination style questions in preparation for Key Stage 4. 	<ul style="list-style-type: none"> • After the assessment run-through, the students complete a DIRT activity to show improvements that have been made post-assessment. • In the summer term, the students sit their end-of-year assessment. This is used alongside all the other data obtained throughout the year to set the students for the next academic year.