



MATHEMATICS DEPARTMENT

Curriculum Overview



The curriculum of the school reflects the demands of the National Curriculum. It is designed in order to provide all pupils with a broad, balanced education relevant to their needs both now and in the future.

Departmental Overview

The Mathematics Department is comprised of twelve specialist teachers and located over three floors of the Derby Building. The department has access to two class sets of laptops and two class sets of iPads, to support pupils with their classwork and to enable them to learn independently. Using these, pupils can make use of the apps and online support provided for them by the department.

Departmental Staff

Mrs C Blade	Head of Mathematics
Miss E Aspinall	Head of KS3 Mathematics
Miss L Buckley	Mathematics Teacher/Staff Numeracy Coordinator
Mr M Donga	Mathematics Teacher
Mr S Donohue	Mathematics Teacher
Mr H Handhill	Mathematics Teacher/Student Numeracy Coordinator
Miss M Haslam	Mathematics Teacher
Mrs D Hennigan	Head of KS4 Mathematics
Ms T Holmes	Mathematics Teacher/Intervention
Mr T Keating	Mathematics Teacher
Mrs L Morgan	Mathematics Teacher
Mrs S Wilkinson	SLT Line Manager

Year 7 Mathematics (KS3)

Examination/Specification Board

Pearson/Edexcel

Curriculum Overview

In Year 7 pupils follow objectives from the new National Curriculum. Pupils are encouraged to build on their knowledge from Key Stage 2, developing their mathematical thinking and preparing them for the GCSE examinations. Pupils are taught to justify their methods and explain their reasoning ensuring they become resilient and independent problem solvers. The course addresses each of the five main strands of the curriculum:

1. Using and Applying Mathematics
2. Algebra
3. Geometry and Measure
4. Statistics
5. Probability
6. Ratio, Proportion and Rates of Change

Problem solving and functional skills are embedded across all strands.

Examinations/Key Assessments

Following a baseline assessment at the start of the year, regular assessment takes place during lessons and a more formal assessment is given once each term to track a pupil's progress. Classwork will be marked in detail by the class teacher, informing pupils of how they are doing, highlighting areas of weakness and strength. Pupils are also taught to mark their own work and the work of their peers. This allows pupils to understand how their work is assessed and how it can be improved.

Homework

This is set once a week and is designed to support the work done during lessons. The task will be detailed on *Show My Homework*, so that pupils and their parents can easily access the work and deadlines. As it is school policy to set homework, a detention will be issued and/or a letter sent home if they are not completed regularly. Prior to assessment periods, pupils may receive an increased volume of homework or independent study work. This will help them to prepare for exam revision in the future. Homework may be set online using MyMaths or MathsWatch websites. This provides support and immediate feedback on the work you have done and allows the class teacher to keep a record of a pupil's progress.

How Parents can Help

- Check *Show My Homework* regularly and ensure all work is completed to a good standard.
- Ensure that basic equipment is brought to each lesson. A pen, pencil and ruler are the minimum requirements.
- Encourage the use of the Internet for homework completion and revision (see useful websites list).
- Talk about the Mathematics that your child is studying and in the world around them. Encourage the use of the correct terms and language (see parent booklet on school website).
- Ensure pupils revise for assessment tests.

Year 8 Mathematics (KS3)

Examination/Specification Board

Pearson/Edexcel

Curriculum Overview

In Year 8 pupils follow objectives from the new National Curriculum. Pupils are encouraged to build on their knowledge from Key Stage 2 and year 7, developing their mathematical thinking and preparing them for the GCSE examinations. Pupils are taught to justify their methods and explain their reasoning ensuring they become resilient and independent problem solvers. The course addresses each of the five main strands of the curriculum:

1. Using and Applying Mathematics
2. Algebra
3. Geometry and Measure
4. Statistics
5. Probability
6. Ratio, Proportion and Rates of Change

Problem solving and functional skills are embedded across all strands.

Examinations/Key Assessments

Regular assessment takes place during lessons and a more formal assessment will be given once each term to track a pupil's progress throughout the year. Classwork will be marked in detail by the class teacher, informing pupils of how they are doing, highlighting areas of weakness and strength. Pupils are also taught to mark their own work and the work of their peers. This allows pupils to understand how their work is assessed and how it can be improved.

Homework

This is set once a week and is designed to support the work done during lessons. The task will be detailed on *Show My Homework*, so that pupils and their parents can easily access the work and deadlines. As it is school policy to set homework, a detention will be issued and/or a letter sent home if they are not completed regularly. Prior to assessment periods, pupils may receive an increased volume of homework or independent study work. This will help them to prepare for exam revision in the future. Homework may be set online using MyMaths or MathsWatch websites. This provides support and immediate feedback on the work you have done and allows the class teacher to keep a record of a pupil's progress.

How Parents can Help

- Check *Show My Homework* regularly and ensure all work is completed to a good standard.
- Ensure that basic equipment is brought to each lesson. A pen, pencil and ruler are the minimum requirements.
- Encourage the use of the Internet for homework completion and revision (see useful websites list).
- Talk about the Mathematics that your child is studying and in the world around them. Encourage the use of the correct terms and language (see parent booklet on school website).
- Ensure pupils revise for assessment tests.

Year 9/10/11 Mathematics (KS4)

Examination/Specification Board

EDEXCEL

Curriculum Overview

A GCSE in Mathematics is valued not only by institutions of further education and Sixth Form Colleges, but by a wide variety of employers and providers of vocational training. A grasp of mathematical concepts and an ability to solve problems and think logically are vital to everyday life, as well as improving your employability. The Mathematics GCSE course consists of five basic strands:

- Number, e.g. fractions, decimals and percentages
- Algebra, e.g. forming and solving equations
- Statistics, e.g. data handling and probability
- Geometry and Measure, e.g. circles and angles
- Using and applying; the application of these skills to solve problems

There is now a greater emphasis on problem-solving skills, which will require a level of skill in each of these areas and will test your ability to apply these skills in a variety of situations. Work in lessons can be individual, paired, group work or whole-class discussion. You may be completing an exercise to practise a skill, or discussing a new concept to address misconceptions and alternative methods. To do this, you will be taught how and when to use appropriate mathematical software and calculators. You will learn written methods and formulae required to solve problems, given exam practice questions and shown how to work independently and revise for your exams.

Examinations/Key Assessments

GCSE Maths is assessed by three written papers; paper 1 is a non-calculator assessment and a calculator may be used for papers 2 and 3. Each exam will contribute to your overall grade. There are two tiers of entry, Foundation (grades 1 to 5) and higher tier (grades 4 to 9), and assessment is by written examination only.

Homework

This is set once a week and is designed to support the work done during lessons or to reinforce a skill necessary to secure understanding. The task will be detailed on *Show My Homework*, so that pupils and their parents can easily access the work and deadlines. Prior to assessment periods, pupils may receive an increased volume of homework or independent study work. This will help them to prepare for exam revision in the future. Homework may be set online using MyMaths or MathsWatch websites. This provides support and immediate feedback on the work you have done and allows the class teacher to keep a record of a pupil's progress.

How Parents can Help

- Check *Show My Homework* regularly and ensure all work is completed to a good standard.
- Encourage the use of the Internet for homework completion and revision (see useful websites list).
- Talk about the Mathematics that your child is studying and in the world around them. Encourage the use of the correct terms and language (see parent booklet on school website).
- Ensure pupils revise for assessment tests and mock examinations.

Year 12/13 Mathematics (KS5)

Examination/Specification Board

EDEXCEL

Curriculum Overview

The study of A-level Mathematics can be both an exciting and challenging prospect. You will develop your abilities to reason logically, generalise and construct mathematical proofs, using mathematics as an effective means of communication. You will relate mathematics to real life situations, representing various scenarios mathematically by constructing models and theorems. Several University courses require A-level mathematics. If you are thinking of studying Science, Engineering, Architecture, Accounting, Business, Computing or Teaching A-level Mathematics can provide you with the skills necessary to succeed.

Examinations/Key Assessments

A level Mathematics is assessed by a set of terminal exams.

Homework

Homework is set weekly using Show My Homework. Past papers and revision guides are available for all students.

How Parents can Help

- Check *Show My Homework* regularly encourage your son/daughter to complete all work to a good standard.
- Encourage the use of the Internet for homework completion, revision and independent study (see useful websites list).
- Ensure pupils revise for assessment tests and mock exams.
- Revision guides and workbooks are available for purchase from the maths department.

Year 12/13 Core Mathematics (KS5)

Examination/Specification Board

AQA

Curriculum Overview

The Level 3 Certificate in Mathematical Studies aims to build on the knowledge, understanding and skills established in GCSE mathematics. You will develop your abilities to reason logically and use mathematics for real world problems such as personal finance and taxation. You will develop your mathematical thinking and learn skills which support courses such as A-level Psychology, Sciences and Geography as well as technical and vocational qualifications. Several University courses benefit from the skills learned in Mathematical Studies, including Accounting, Business, Computing or Teaching. Level 3 can provide you with the skills necessary to succeed and many valuable skills for life.

Examinations/Key Assessments

Level 3 Certificate Mathematical Studies is assessed by a set of terminal exams.

Homework

Homework is set weekly using Show My Homework.

How Parents can Help

- Check *Show My Homework* regularly encourage your son/daughter to complete all work to a good standard.
- Encourage the use of the Internet for homework completion, revision and independent study (see useful websites list).
- Ensure pupils revise for assessment tests and mock exams.