

Little Heath School Sixth Form

Year 12 Induction Evening for Parents 2016

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| Mathematics and Further Mathematics |

Welcome to the department

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(Deputy Head) - GDowling@littleheath.org.uk

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AS/A Level Mathematics 🡪 Pure & Statistics **or** Pure & Mechanics (AQA)

AS/A Level Further Mathematics 🡪 Further Pure, Statistics & Decision (AQA)

A Level Maths and Further Maths consists of 6 units, 3 AS units and 3 A2 units. The AS units will be studied and examined in the Year 12, and the A2 units will be studied and examined in the Year 13. The 3 AS modules form the AS qualification. The AS qualification forms 50% of the A Level award, so it is very important to maximise success at AS Level, thus giving students the best possible chance of doing well at A Level. Students have 8 teacher led lessons per fortnight and 2 supervised lessons, 5 pure mathematics and 3 application lessons.

Key to success at A Level

Students are issued with a **Personal Learning Checklist** which allows them to rate their understanding of each topic and respond with the appropriate intervention by seeking help from their teachers or independent study. They should be used at regular intervals to rate confidence and success and plan intervention and action to improve understanding.

**Expectations**

A **successful learner** in AS/A Level Mathematics will:

* not allow misunderstandings to continue, pursuing errors until they are resolved,
* practise techniques so that every problem can be solved
* actively participate during lessons - asking searching questions to ensure understanding of the concepts, not just an ability to apply the methods,
* keep their class notes in order, appreciating how the different units relate to each other,
* be fully prepared for the unit tests and iron out any misunderstandings prior to these,
* make time to look over the homework that has been returned to them and take note of the mistakes they have made and comments written by their teachers in order to learn from them,
* read and work from other texts,
* use the teacher as a resource – ask for help
* become an Independent Learner.
* **Attend FUNBUS – every Thursday after school (Homework club with FREE tuition from staff)**

In summary, they will arrive at each lesson fully conversant with the concepts covered at the previous lesson with all homework complete, and prepared to extend these concepts to solve questions of increasing complexity.

What parents can do to help

*Parents should encourage regular attendance at FUNBUS which is the once a week ‘homework club’ for sixth form students. (Thurs 3.30-4.30pm)*

*Parents should ensure that students complete their homework. Mathematics students always have something to do. Homework is given after virtually every lesson, and expected in the following lesson.*

Important deadlines

Neither Mathematics nor Further Mathematics have a coursework element.

Students will sit **regular half-termly tests** covering the topics taught. It is expected that students should achieve a reasonable result, of about **60%**, in order to demonstrate an understanding of the skills covered in that topic. A student not achieving this will receive extra assistance and be required to sit a re­-test. **The first test is w/b 10th October.** **There will be revision after school on Thursday 6th October and Monday 10th October.**

Essential equipment

**It is essential that all students have a calculator and also that those studying the statistics module, download a copy of the Booklet of Statistical Tables and Formulae from the AQA website.**

**Recommended Textbooks**

With the advent and popularity of such sites as EBay and Amazon it has become relatively cheap to buy good quality second hand books. Students would benefit from having their own copies of the set texts, but should check with individual teachers first before purchase.

**Advancing Maths for AQA 2nd Edition**

Yr 12

Pure Core Maths 1 & 2: ISBN 0-435-51330-3

Statistics 1: ISBN 0-435 51338-9 or

Mechanics 1: ISBN 0-435 51336-2 or

Decision Maths 1: ISBN 978-0-435 51335-1 or

Further Pure Maths 1: ISBN 0-435-51334-6.

Yr 13

Pure Core Maths 3 & 4: ISBN 0-435-51331-1,

Statistics 2: ISBN 978-0-435-52339-9or

Mechanics 2: ISBN 978-0-435513-37-5 or

Decision Maths 2: ISBN 978-0-435-51319-1

Further Pure 2 and 3 are free to download from the AQA website.

**Revision guides** will be available to purchase through the school later in the course.

It is also advantageous to have access to a **graphical calculator**, as these help students to visualise problems which involve graphs. Students are permitted to use graphical calculators in all the mathematics modules except C1 which is completely non-calculator. If you have access to a tablet such as an ipad it is possible to download a graphing package, however these are not yet allowed in the examinations.