

# **Mathematics Department**

## **Head of Department**

Mrs M Sharma

## **2nd in Department and KS4 Co-ordinator**

Mr D Bhakar

## **KS5 Co-ordinator**

Mrs F Subratty

## **KS3 Co-ordinator**

Mr C Jeyakumar

## **Maths Teachers**

Mr P Welch

Mrs V Peel

Miss S Begum

Mr R Smith

Miss L Sobratee

Miss A Rahman

The Mathematics department occupies the entire first floor of Bede House. Every teaching room has SMART interactive boards and teachers use a range of ICT packages to aid teaching, including the online software MyMaths, which students are encouraged to use at home.

Students are entered for the UK Mathematics Challenge and the East London Mathematics Competition. We also take students on residential and day trips to enhance and enrich their mathematical skills, including 'Maths in Action' lectures and workshops for KS4 and KS5. We organise theatre trips aimed at Sixth Form students and have recently taken students to see 'A Disappearing Number' and 'Arcadia', another interesting play including higher level ideas.

## **Departmental Aims**

The Mathematics department constitutes a hardworking, enthusiastic and dedicated team of ten full-time, specialist members of staff. The department aims to give the best possible education to each child and staff work hard to ensure that every student achieves their potential. The department provides a positive, focussed learning environment and have an open door policy to encourage students at all key stages to come for help whenever needed.

Mathematics holds a very high status, not only within the academy but also with students and parents. The Palmer Catholic Academy Mathematics department takes pride in the exceptional results students achieve at all levels, GCSE grade 8-9 22%, grade 4-9 84% (June 2017), A Level Maths 100% pass rate (A\*-C 91%) and A Level Further Maths 100% pass rate (A-B 85%). The department takes a lead role in whole school initiatives.

## KS3 Mathematics Overview

In Year 7 the students are split into two half-year groups. Initially they are taught in their mixed ability tutor groups. At the end of September, the students are put into sets (6 tutor groups into 8 sets). The setting is based on an assessment, together with other evidence such as classwork and homework and KS2 results. There are four sets within each half year. The setting is similar in Year 8, with four sets in each half-year group.

Students are tested regularly and this information, together with homework and classwork marks, is used to review the sets, with students being moved between sets as appropriate. Students also have four 100 minute lessons of Maths over the course of two weeks to prepare them for KS4.

The KS3 schemes have been reviewed to incorporate the key changes to the curriculum at KS3 and GCSE. A variety of resources are used, with the main textbooks being Key Maths and Collins New Maths Frameworking.

Year 7 and Year 8

Skills Developed

- Fluency in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that students develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Mathematical reasoning by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- Problem solving by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

### Curriculum Overview (Autumn, Spring and Summer Term)

Number and Algebra				Geometry
1. Investigating Number Systems	2. Pattern Sniffing	3. Solving Calculation Problems	4. Generalising Arithmetic	5. Exploring Shape

Geometry and Measures	Number and Algebra			Statistics
6. Reasoning with Measures	7. Discovering Equivalence	8. Reasoning with Fractions	9. Solving Number Problems	10. Investigating Statistics

Geometry	Number and Algebra		Geometry and Measures	
11. Visualising Shape	12. Exploring Change	13. Proportional Reasoning	14. Describing Position	15. Measuring and Estimating

- In addition to their normal lessons, the students also benefit from a wide range of support programmes including: UKMT and Hans Woyda Maths Challenges for G&T students and booster sessions for underachieving students.

#### Useful websites at KS3

[www.mymaths.co.uk](http://www.mymaths.co.uk)

Username: palmer

Password: square

[www.corbettmaths.com](http://www.corbettmaths.com)

[www.bartonmaths.com](http://www.bartonmaths.com)

[www.keshmaths.com](http://www.keshmaths.com)

[www.heragrtymaths.com](http://www.heragrtymaths.com)

[www.kangaroomaths.com](http://www.kangaroomaths.com)

[www.mnagahigh.com](http://www.mnagahigh.com)

#### **KS4 Mathematics Overview**

GCSE (9-1) Mathematics will have the first sitting in June 2017

- Two tiers are available: Foundation and Higher
- The qualification consists of three equally weighted written examination papers at either Foundation tier or Higher tier, each 1 hour 30 minutes and 80 marks.

Years 9, 10 and 11 are taught across the year with 8 sets. Students in years 9 10 and 11 follow the Edexcel GCSE. All of the students follow the linear course, with our lower sets following the foundation course. Students are tested regularly and half termly sets are reviewed and adjustments made.

The new GCSE 9-1 focuses heavily on the application of Maths

Schemes of work for KS4 are available on the website as a separate document.

#### Useful websites at KS4

[www.mymaths.co.uk](http://www.mymaths.co.uk)

Username: palmer

Password: square

<https://vle.mathswatch.co.uk/vle/>

[www.corbettmaths.com](http://www.corbettmaths.com)

[www.bartonmaths.com](http://www.bartonmaths.com)

[www.keshmaths.com](http://www.keshmaths.com)

[www.heragrtymaths.com](http://www.heragrtymaths.com)

[www.kangaroomaths.com](http://www.kangaroomaths.com)

[www.mnagahigh.com](http://www.mnagahigh.com)