

# Kingsbury High School

A specialist Maths and Computing College



Maths &  
Computing

Summer 2009

## Specialist School report

### Our Vision of Achievement

- Raise standards of achievement in Maths and ICT
- Develop further interest of the specialist subjects across the whole ability range leading to whole school improvement.
- Improve the quality of teaching and learning in the specialism.
- A mathematically rich curriculum that embraces all aspects of school life
- Share good practice across the curriculum, particularly through considered use of ICT.
- Raise the post-16 participation rate in mathematics and computing related subjects by promoting the full range of courses available.
- Work with partner schools for the benefit of pupils beyond our own school boundaries and with groups of people in the wider community.

### Achievements

- Extra teachers in Mathematics and I.C.T. to provide extra KHS classes for the community.
- New Music ICT suite
- Refit to Computer and Media Rooms
- Computer and Photography suite
- Interactive Whiteboards in many classrooms
- Computer access in every classroom
- Support Assistant used across many subject areas in the school.
- Working with the Languages Faculty to set up a programme of beginner Mandarin lessons for the sixth form. The teaching of Mandarin has now been extended as an opportunity across all Key Stages and can now be taken as an external qualification. In September there will be a teacher joining the school from China for one year.
- **Resources and Courses:**
- Development of the school website and Intranet
- Access to on line learning resources—SAM Learning
- Evening Classes in ICT
- FRONTER- Managed Learning Environment
- ECDL training, CISCO and Microsoft academies



In recognition of the outstanding results achieved by our students, Lord Adonis, then Parliamentary Under Secretary of State for Schools, visited the Maths Department on 17<sup>th</sup> September 2008 to see if lessons learned from our success could be applied elsewhere.

*"I am hugely impressed by the success of Kingsbury High School, including its outstanding maths department. The school does excellent work in its community and I congratulate all the staff and students on their achievements."* Lord Adonis.

# MATHEMATICS AT KHS

- Mathematics at Kingsbury is in the top 8% of schools for adding value between Key Stage 2 (Year 7) and Key stage 4 (year 11, CVA).
- Best results at A' Level in Brent for the last 2 years and in the top 10% of schools nationally (VA).
- The number of pupils opting to study a Maths A-level at Kingsbury High School has risen over the last 2 years by 60%. We are now the largest centre in Brent with 170 students studying Maths in the Sixth Form (Jan 2009).

Since becoming a specialist subject the mathematics department has:

**1. Raised levels of achievement at Key Stage 4:**

**2003/04                      2007/08**

**A\*/A 26%                      A\*/A 31%**

**A\*-C 61%                      A\*-C 77%**

Initiatives:

- Fast track GCSE ~ Up to 100 students take GCSE in year 10 then proceed to take either AS or Additional Maths in year 11
- Intranet site and vast array of resources available to students including all GCSE & A-Level past exam papers
- The Conquer Maths web site being used by KS3 pupils, with well over 30,000 hits. Every single day over 170 pupils logged on to this to do extra work

- Easter revision sessions for GCSE and A level students
- Saturday GCSE classes
- Sixth form students mentoring GCSE pupils

**2. Raised levels of achievement at KS5 and increase choice of courses available**

**2003/04                      2007/08**

**A2 A/B 48%                      A2 A/B 84%**

Initiatives:

- Increase in courses offered Students can take AS Maths, A2 Maths, A2+AS Further maths, A2+A2 Further maths plus extra modules in Pure, Mechanics, Statistics and Decision maths.
- Intranet site: Edexcel past papers and alternative exam papers, live Maths.

- Easter revision classes
- Module revision days during study leave
- Video clip lessons at all A- Level topics

**3. Provided greater challenge for all students in the mathematics curriculum:**

- Many students studying A level topics in yr 9
- 20% of each year group participate in the UK Maths Challenge
- After school sessions for Female Mathematicians
- Lunchtime Maths clubs for lower school students.

## MATHS HAS TO BE HARD TO BE INTERESTING

Important things are often demanding. Worthwhile activity feeds on frustration and failure

# MATHEMATICS IN THE COMMUNITY

Our linked primary schools are Fryent, Kingsbury Green, Oliver Goldsmith and Roe Green.

Each primary school is visited regularly by a member of the Mathematics department.

Schools nominate pupils for extra support.

We run:

-Yr 6 Gifted and Talented classes

-Yr 5 Gifted and Talented classes

-Yr 6 Raising level 3 to level 4 classes

We teach extension level topics and give pupils logic based problems to solve.

## PUZZLE

The equation shown below is not correct

$$5 + 5 + 5 = 550$$

Can you make the equation correct by placing just one stroke?

(putting a stroke through the equal sign is an inventive solution, but not the one we are looking for!).

# COMPUTING AT KHS

Since becoming a specialist subject the Computing department has:

**1. Raised the standard of attainment in KS3 + KS4**

**2003/04**

No GCSE ICT courses

**2007/8**

KS3	95% L5+
KS4	71% A*-C

Initiatives:

- Innovative and engaging Programmes of Study for Yrs 7-9 that include Game Maker, Graphic Editing, Website Development, Business Projects and Computer Programming.
- Lunchtime computer and homework clubs for KS3 pupils
- Intranet site that contains all lessons and resources including links to downloadable free software that is used in school for both KS3 and KS4.
- Booster sessions lunchtime and after school for GCSE students.

- All students study ICT equivalent to 1 GCSE and have options to take up to 4 GCSEs. There are also other courses available such as Microsoft, CLAIT and Building a PC.

- Teaching Assistant to work with selected pupils in Focus Groups to raise attainment.
- Introduction to GCSE topics and coursework in Year 9.
- Taster Sessions for ALL KS5 courses taught from end of Year 11
- AS Level Course classes for Gifted & Talented Yr9 and Yr 10 pupils

**2. Raised standards of attainment in KS5 + Increase the breadth of coverage of latest ICT technologies**

**2003/4**

Computing A2	100% A-E
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**2007/8**

Computing AS	100% A-E
A2	22% A/B 100% A-E
Applied ICT	88% A-E

- Increase in courses offered. Students can take AS/A2 Single Applied ICT, As/A2 Double Applied ICT, As/A2 Computing and a new course from September 2009, AS ICT.
  - Intranet site contains all resources for students to refer to.
  - CISCO course and sessions offered during school and Saturdays for students to attend that can help with KS5 courses.
  - Easter revision classes
- 3. Expand provision of cross-curricular ICT**
- ECDL offered to KHS and partner school staff
  - New technology introduced e.g. visualiser

# COMPUTING IN THE COMMUNITY

**Free ICT courses Monday Evenings**

Every Monday evening 6.30 to 8.30 free ICT classes in the Lower School, Bacon Lane.

Beginner and intermediate levels.

Since 2001, approximately 200 people have enrolled on our courses.



*".. support was available at all times and the tutors were very patient with me.."*

*Mr. Barnes, Intermediate Class*



Several students have taken the e-Citizen course. Pictured is a successful year 7 Student with instructor Miss Aswathy Bose



**Must be a world record?**

Last year Omoverere Agarin chose to study ECDL at the KHS Computing Academy.

He passed all seven units in less than 2 hours!

Surely that must be a record, the average student takes over 3 months to complete the course.



Omoverere with one of our ECDL staff Nandini Bhagwat

Details of ECDL and all our other ICT Courses can be found at

**<http://khselearning.org.uk>**

## Outreach Work with primary schools

We have developed some exciting ICT projects with our feeder primary schools.

Year 6 Kingsbury Green Students worked on a robotics project with a group of our Year 9 students.

Develops problem solving, logical thinking and teamwork skills. Plus it's fun!



## Game Making with Oliver Goldsmith

Year 6 students made their own "pacman" style games in just three sessions.

Very impressive results, with each student awarded a certificate and our year 12 MVs awarded Bronze, Silver and Gold certificates to the best games.



## ICT COURSES AVAILABLE AT KHS

In 2009 we are offering these ICT courses:

**ECDL (European Computer Driving Licence)**

**E-Citizen**

**Microsoft Office Specialist**

**Microsoft Digital Literacy Certificate**

**CISCO CCNA Discovery**

**CISCO IT Essentials**



Networking Academy



We also offer our own certificated courses.

**ICT for beginners**

**How to be safe using internet, for Parents.**

**Tips & tools for using a computer safely and securely**

**Computer Maintenance and repair (drop in sessions)**

For more information see <http://khselearning.org.uk>

Or contact

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