



## Teacher of Mathematics

### King's College London Mathematics School

- Full time from September 2018
- Salary £27,000 - £36,500 depending on experience

#### Job pack contents:

- Application procedure
- Information about King's College London Mathematics School, and the post;
- Job description;
- Person specification.

## Application Procedure

Should you wish to apply for this position please send the following:

- A completed application form, and
- An Equality and Diversity reporting form

Links to these documents can be found on our [website](#).

You may include a curriculum vitae and/or covering letter as well as, but not in place of, the application form.

Applications should be made electronically in Word or PDF format by email to [mathsschool@kcl.ac.uk](mailto:mathsschool@kcl.ac.uk). Enquiries may be made to Mr Toby Jones, Head of Mathematics, by emailing [Toby.Jones@kcl.ac.uk](mailto:Toby.Jones@kcl.ac.uk).

**Closing date: 12pm on Wednesday 31 January.**

**Interviews will be held: Tuesday 6 February and Thursday 8 February.**

Please advise your referees that they may be contacted and asked to provide a reference at short notice.

## **King's College London Mathematics School (KCLMS)**

[www.kcl.ac.uk/mathsschool](http://www.kcl.ac.uk/mathsschool)

King's College London Mathematics School is for highly motivated students aged 16-19 with a particular aptitude and enthusiasm for mathematics who wish to progress to competitive degrees and careers in which mathematics is applied. The school aims to widen participation in high quality mathematics teaching by recruiting students who would not otherwise have access to such teaching at sixth form level. The school opened in September 2014.

### **The curriculum**

Our aim for the curriculum is for it to not only ensure excellent progress and attainment at A-level, but also to prepare students for successful study at university.

All students at the school take Mathematics, Further Mathematics and Physics to A-level, and either Computer Science or Economics to at least AS-level. They also take part in an extended curriculum that includes a modern language, and that develops literacy and communication skills through a programme of personal development and of Academic Literacy leading to optional completion of an Extended Project Qualification. Throughout both the core and the extended curriculum there is an emphasis on a connected and coherent approach that reflects the links between subjects.

Students are prepared throughout their time at the school for the most challenging qualifications at sixth form level, including the STEP (Sixth Term Examination Paper) set by Cambridge, an important pre-requisite for mathematics courses at some of the best universities in the UK. They are also prepared to enter the many individual challenges and team competitions that are available in mathematics, physics and computer science.

### **The link to King's College London**

King's College London are the sponsoring organisation for King's College London Mathematics School, and the university maintains strong strategic and operational links with the school. The Mathematics, Physics and Informatics departments of King's College London were closely involved in curriculum development for the school and maintain an ongoing supportive role, ensuring strong intellectual foundations and insight into developing applications of mathematics. PhD students from King's visit the school weekly to run problem solving classes for students in small groups.

King's has an outstanding reputation for providing world-class teaching and cutting-edge research. It is one of the top 25 universities in the world (2016/17 *QS World University Rankings*) and the fourth oldest in England.

### **Site and Size**

The school is located on Lambeth Walk, near to the Imperial War Museum and a short walk from the King's Waterloo campus. The school has 150 students split between year 12 and year 13.

### **Admissions Policy**

King's College London Mathematics School operates a selective admissions process. The key entry requirements are:

- At least seven GCSEs at grade 5-9, including: Mathematics (grade 8 or better), Physics or dual award science (grade 7 or better), and English (grade 5-9);
- A threshold score in a mathematical entry test set by the King's College London Mathematics School;
- A successful interview in which the school will assess the likely impact it will have on the future career of each applicant.

The school is committed to recruiting a significant proportion of students from socially disadvantaged backgrounds, and to an outreach programme (see below) to further this objective.

## **Outreach**

King's College London Mathematics School aims to be a centre of excellence for the teaching of mathematics and its applications. The school supports high-attaining students across London, and in particular those who come from more challenging backgrounds, to develop their mathematical skillset, and also works with teachers to provide professional development around the teaching of Mathematics and Further Mathematics A Levels. All mathematics teachers are involved in supporting this outreach programme, principally by teaching on a weekly programme of mathematical enrichment provided for students in years 10 and 11 from all over London.

## **Teacher of Mathematics**

The school is seeking to appoint a dynamic and inspirational teacher of mathematics to work in a unique and talented department to realise the vision and ambitions for the school.

Mathematics lies at the core of everything that takes place at King's College London Mathematics School; it is the passion that unites teachers and students alike, and it represents a way of thinking and creating that empowers and enriches all the different aspects of the school curriculum.

Whilst the school has many high-attaining students, the department does not accelerate through A-level material to focus on university level content, but instead teaches in a way that develops effective mathematical thinking. The aim is to provide students with not only a powerful set of tools but also the ability to use those tools flexibly and creatively, and to help them to internalise an understanding of each idea encountered as well as of the connections between those ideas. Using the A-level Mathematics and Further Mathematics as a framework for such developments, students begin to see both what pure mathematics is, and how mathematics can be applied in complex situations where complete solutions may not be possible. The approach taken employs a greater rigour than would usually be expected at this level, with a general supposition that statements are proved and methods justified. In lessons, teachers focus on the use of Socratic questioning to test and develop understanding, and on carefully structured problems to provide effective learning experiences for students.

The mathematics department consists of nine well-qualified mathematicians, and is highly collaborative: in addition to a weekly department meeting, there is at least one session per week for each of the core, mechanics and statistics sections of the curriculum dedicated to planning. By working together to plan lessons in detail, the department mirrors the lesson study model that research has shown to be so effective. There is an excitement around mathematics beyond the classroom, and this extends to the many individual and team competitions that exist as well as to mathematical talks and activities. Students perform at the highest levels in such competitions, and A level performance is exceptionally high: 93% of A2 grades in Mathematics and Further Mathematics were A or A\* grades in August 2017, with value added at +1.2 grades per entry on average across the two subjects.

The successful candidate will have strong academic credentials. They may already have a proven record of outstanding teaching, or they may be new to the profession, in which case they would be supported by the school's thorough mentoring programme. A vital qualification will be that they share the vision of the school to help young people with a particular aptitude for mathematics find challenge and excitement in a curriculum that fosters intellectual growth and curiosity.

The post will commence from 1 September 2018.

# Job description

Post title	Teacher of Mathematics
Responsible to	Lead Teacher of Mathematics

## Role outline

The Teacher of Mathematics will be responsible for preparing and teaching high quality lessons, ensuring the academic progress of their students, promoting the subject more widely and encouraging further study of mathematics in higher education. They will take charge of the care, guidance and support of a tutor group, and will work collaboratively with all staff to realise the vision of the school, including by working on the school's outreach programme.

## Responsibilities

### As a Mathematics Teacher:

- To teach mathematics to KCLMS students, maintaining outstanding standards of teaching and learning.
- To support the school in developing an inventive approach to teaching, learning and assessment in mathematics so that all students are challenged effectively and enabled not simply to get high grades but also to gain an excellent understanding of the subject which propels them into successful further study.
- To prepare appropriate resources for lessons.
- To provide academic support for students in their lessons, as well as a reasonable degree of support outside lessons (e.g. after school or during part of lunch) to ensure that every student makes continuous and effective progress.
- To provide feedback on students' progress to the school, to parents/carers and to students themselves where appropriate and as directed by Senior Leaders.
- To provide or contribute to written assessments, reports and references relating to individual students and groups of students.
- To participate in arrangements for preparing students for public examinations and in assessing students for the purposes of such examinations.
- To participate fully in the learning community of KCLMS teachers, for example by regularly observing colleagues and welcoming observations in return, by contributing enthusiastically to discussions around teaching and learning, and by attending professional development activities either at KCLMS or elsewhere to improve and enhance your own practice, including attending meetings which take place outside of normal working hours.
- To teach mathematics to students enrolled on the school's GCSE enrichment programme.

### As a tutor:

- To take responsibility for the care, guidance and support and the academic monitoring and eventual outcomes of a tutorial group, to include tracking and reporting on students' attendance and their academic, social and personal development, and taking actions to improve these outcomes.
- To manage students' welfare and academic performance in particular through the Academic Mentoring programme, meeting with students individually on a regular basis.
- To ensure that all students observe KCLMS policies relating to dress, behaviour and other

matters, and that they take proper care of KCLMS's environment and resources.

- To prioritise at all times the safety and well-being of the students by following the Welfare & Safeguarding policies.

**As a member of staff:**

- To contribute to the extended curriculum, including by supporting and developing the academic literacy of students in their own teaching and through the academic literacy programme.
- To contribute to a programme of after-school and lunchtime academic enrichment and co-curricular activities.
- To participate in recruitment events such as Open Evenings, Taster Days and Interview Days, some of which take place on weekday evenings or at weekends.
- To lead or assist offsite trips and visits (any necessary training, for example around First Aid or Risk Assessment, will be provided).
- To embody and promote the school values.
- To contribute to the establishment and maintenance of a caring, positive, safe and stimulating environment for each student at King's College London Mathematics School.
- To prioritise at all times the safety and well-being of the students by following the Welfare & Safeguarding policies.
- To attend training days in reasonable proximity to the start or end of the KCLMS terms (usually, within four working days of the published term dates), and demonstrating a personal commitment to be fully up-to-date with training.
- To take a share of the duties around student supervision.
- To provide cover for absent colleagues, and participate in arrangements for students' supervision during public examinations.
- To undertake any other duties which may be reasonably required by KCLMS.

# Person specification

## Eligibility to work in the United Kingdom

The advertising of this post has not been compliant with UKBA guidelines for candidates who need to apply for a Certificate of Sponsorship to work in the UK.

Criteria	E S S E N T I A L	D E S I R A B L E	HOW IDENTIFIED AND ASSESSED  AP Application I Interview R References TL Taught Lesson
<b>Education/qualification and training</b>			
Excellent grades in A-level Mathematics and Further Mathematics, or equivalent qualifications	X		AP
Good honours degree in Mathematics or in a subject containing a significant proportion of Mathematics	X		AP
Qualified Teacher Status		X	AP
PGCE		X	AP
<b>Experience</b>			
Successful and recent teaching experience of Mathematics to high-attaining students aged 16-19		X	AP, TL, R
Successful and recent AS- and A2-level Mathematics teaching		X	AP, TL, R
Successful experience as a tutor in a school		X	AP, I, R
Experience of preparing students for university entrance in Mathematics, including supporting UCAS applications		X	AP, I
Experience of mathematical extension papers (STEP, MAT, AEA)		X	AP, I
<b>Knowledge/skills</b>			
Precise and analytical self-reflection	X		I, TL
The depth of knowledge and the mental agility to allow flexibility in lessons	X		I, TL
Ability to quickly create effective rapport and a constructive relationship with students	X		TL
Excellent communication skills, both written and verbal	X		AP, I
Excellent organisational skills, including keen attention to detail	X		AP, I
Excellent IT skills, including the ability to learn new systems quickly and use them intelligently and flexibly	X		AP, I
Knowledge of the needs of SEN(D) learners, in particular learners with high-functioning Autism / Aspergers		X	AP, I
<b>Personal characteristics/other requirements</b>			
Commitment to the educational vision and the mission of King's College London Mathematics School	X		AP, I
Profound and continuing interest in the subject(s) to be taught	X		AP, I

Profound and continuing interest in learning, teaching and assessment	X		AP, I
Commitment to own self-development	X		AP, I
Capacity to take initiative and to innovate	X		AP, I
Ability to lead and to enthuse others	X		AP, I
Ability to work constructively with others inside and outside the school	X		AP, I
Integrity and reliability	X		AP, I

### **Safeguarding**

King's College London Mathematics School is committed to safeguarding the welfare and well-being of children and applicants must be willing to undergo child protection screening appropriate to this post, including checks with past employers and the Disclosure and Barring Service.

### **Equal opportunities**

King's College London Mathematics School recognises that equality of opportunity and the recognition and promotion of diversity are integral to its strengths. The following principles apply in respect of the School's commitment to equality and diversity:

- To provide and promote equality of opportunity in all areas of its work and activity;
- To recognise and develop the diversity of skills and talent within its current and potential community;
- To ensure that all employees and prospective employees of the School are treated solely on the basis of their merits, abilities and potential without receiving any unjustified discrimination or unfavourable treatment on grounds such as age, disability, marital or civil partner status, pregnancy or maternity, race, religion or belief, sex, sexual orientation, gender, gender reassignment, trans status, socio-economic status or any other irrelevant distinction;
- To provide and promote a positive working, learning, and social environment which is free from prejudice, discrimination and any forms of harassment, bullying or victimisation;
- To promote good relations between individuals from different groups.

### **Applicants with disabilities**

King's College London Mathematics School is keen to increase the number of disabled people it employs. We therefore encourage applications from individuals with a disability who are able to carry out the duties of the post. If you have special needs in relation to your application please contact the HR Manager, Gaenor Stevenson, by emailing [Gaenor.Stevenson@kcl.ac.uk](mailto:Gaenor.Stevenson@kcl.ac.uk)

Thank you for your interest in King's College London Mathematics School.