Teacher of Mathematics

King's College London Mathematics School

- Full time from September 2021
- Salary £29,100 - £39,300 depending on experience

Job pack contents:

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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. Enquiries may be made to Michael Bennett, Head of Mathematics, using the same email address.

Closing date: 9am on Monday 1 March.
Interviews will be held on: Wednesday 3 March, Thursday 4 March.

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.kingsmathsschool.com
King's College London Mathematics School is for students with a particular aptitude and enthusiasm for mathematics, and aims to widen participation in mathematical degrees and careers at the very best universities and institutions. The state-funded school was opened in 2014 by King's College London, and since then its students have consistently attained unparalleled attainment and progress through A Level results that have established the school as one of, if not the top performing school in the country. Following the school's success, maths schools are now being opened by universities across the UK.

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 further study and careers in the mathematical sciences.

All students at the school take Mathematics, Further Mathematics and Physics to A-level, and either Computer Science or Economics to AS-level. They also take part in an extended curriculum that develops research, independence, literacy and communication skills, and that encourages the development of interests and of a healthy lifestyle.

Students are prepared throughout their time at the school for the most challenging qualifications at sixth form level, including STEP (Sixth Term Examination Paper, set by the University of Cambridge). 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 is one of the top 10 universities in Europe (*Times Higher Education World University Rankings 2020*) and the fourth oldest in England. It is the sponsoring organisation for KCLMS, and the university maintains strong strategic and operational links with the school. The Mathematics, Physics and Informatics departments of King's College London are 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.

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 and financially disadvantaged backgrounds, and to an outreach programme 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.

Teacher of Mathematics

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. 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.

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, on carefully structured problems to provide effective learning experiences for students, and on the frequent use of the whiteboards that surround all of our classrooms to develop a culture of collaborative enterprise.

The mathematics department consists of nine well-qualified mathematicians, and is highly collaborative: in addition to a weekly department meeting, there are weekly sessions 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: 94% of A2 grades in Mathematics and Further Mathematics were A or A* grades in August 2019, with value added at +0.9 grades per entry on average across the two subjects. Approximately 50% of all graduating students go on to study mathematics at competitive universities, with Oxford, Cambridge, Warwick and UCL being the most common destinations in recent years.

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.

Should the successful candidate be interested and appropriately qualified, there may be opportunities to teach Physics at the school also.

The post will commence from 1 September 2021.

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 and Activities

As a Mathematics Teacher:

- 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 teach mathematics to KCLMS students, maintaining outstanding standards of teaching and learning.
- To teach mathematics on KCLMS outreach programmes.
- To work collaboratively with the Mathematics teaching team to deliver the vision of the department.
- 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.

As a tutor:

- To take responsibility for the care, guidance and support and the academic monitoring of a tutorial group, to include tracking and reporting on students' attendance and their academic, social and personal development.
- 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 contribute to the establishment and maintenance of a caring, positive, safe and stimulating environment for each student at KCLMS.

- 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 a programme of after-school and lunchtime academic enrichment and co-curricular activities, which may sometimes require reasonable evening or weekend commitments, some of which will be offsite.
- 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 contribute to the establishment and maintenance of a caring, positive, safe and stimulating environment for each student at KCLMS.
- 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 Senior Leaders.

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	ESSENTIAL	DESIRABLE	HOW IDENTIFIED AND ASSESSED AP Application I Interview R References TL Taught Lesson
Education/qualification and training			
Excellent grades in A-level Mathematics and Further Mathematics, or equivalent qualifications	X		AP
Good honours degree in Mathematics or in a subject where a significant proportion of courses were in abstract mathematics	X		AP
Qualified Teacher Status		X	AP
PGCE		X	AP
Experience			
Recent teaching experience of mathematics to high-attaining students aged 16-19		X	AP, TL, R
AS and A2 level Mathematics and Further Mathematics teaching		X	AP, TL, R
Preparing students for university entrance in Mathematics, including supporting UCAS applications		X	AP, I
Preparing students for mathematical extension papers (STEP, MAT, AEA)		X	AP, I
Care, guidance and support as a pastoral tutor in a school		X	AP, I, R
Knowledge/skills			
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
Personal characteristics/other requirements			
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

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