



UNIVERSITY OF

LIVERPOOL
MATHS SCHOOL
EDUCATION FOR 16-19 YEAR OLDS

Axiom Maths Tutor

University of Liverpool Mathematics School (ULMaS)

- Temporary contract to cover blocks of tutoring assignments
- Salary £16ph + holiday pay
- Start date to be arranged

Job pack contents:

- Application procedure
- Information about ULMaS, 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 (on the TES website) including a supporting statement which should be no longer than 500 words

In your supporting statement you should explain how your skills and experience fit the person specification (see below). You could also explain why this role would help the development of your career.

You will then be contacted by the Axiom lead at school who will look to organise a meeting (online or in person) to discuss your application and next steps.

Enquiries may be made to Mary Higham, Office Manager
mary.higham@liverpoolmathsschool.org

Closing date: see TES advertisement

Interview date: TBC

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

Axiom Maths Tutor

The purpose of the Axiom Maths Circles is to support students from all backgrounds to achieve mathematical excellence, so that they feel more confident as mathematicians and can go on to have a greater and richer range of future personal, employment and economic choices. Maths Circles facilitate this by enriching the mathematical experiences of students, enabling them to enjoy mathematics and identify as mathematicians.

Mentors are asked to deliver one session, with one hour training and 30 minutes of feedback each week. Blocks are organised into 10 sessions over 10 weeks, therefore a mentor is asked to commit to at least 2.5 hours each week, for 10 weeks.

Sessions will take place online and in-person in schools across Liverpool and surrounding areas.

The key responsibilities of the post are:

- Provide maths mentoring for a small group of students from year 7, 8 and 9 (ages 11-14) from north west schools.
- Reflect and report on the progress made by students
- Actively engage in training and development.

Provide mentoring for KS3 students

- To support a group of 6 students to develop their problem solving through weekly online or in person Maths Circles.
- To encourage students to think for themselves
- To use good questioning as a catalyst for deep and sustained learning
- To encourage students to be adventurous and articulate when tackling problems in their Maths Circle.
- To use online platforms such as Zoom and others to facilitate learning and collaboration.

Reflect and report on the progress made by mentees

- To complete a weekly attendance register
- To complete a weekly feedback form
- To join meetings to reflect on successes and opportunities for development.
- To reflect on ideas, issues and suggestions to maximise progress for participants.

Actively engage in training and development

- To actively participate in training sessions prior to beginning the mentoring.
- To attend weekly training sessions online to prepare for the following Maths Circle.
- To review material as directed by Axiom and University of Liverpool Maths Schools outreach and admissions coordinator as well as their Lead Mentor, to ensure you are prepared for the next monitoring session.
- To seek and act on feedback from the Axiom co-ordinator and other mentors.

- To actively reflect on your mentoring and work to develop best practice over time.

Additional Duties

- To promote a teaching, learning, and working environment that is free from discrimination and where all students and staff are encouraged to express their individuality.
- To be responsible for safeguarding and promoting the welfare of students.
- To maintain the confidentiality of staff/student/family information.
- Promote and conduct your professional duties and responsibilities within the parameters of the school's and Axiom's agreed values and aims.

The above list of responsibilities is not exhaustive, and you will be required to undertake such tasks and responsibilities as may reasonably be expected within the scope of this position, as directed by the Lead Tutor/Supervisor.

Why work with ULMaS?

As an employee at the [University of Liverpool Maths School](#) you will be part of a close-knit team united in their desire to transform the life chances of young people across Merseyside by developing their education to the highest standard. ULMaS is a well funded institution with a high level of support from the University of Liverpool, the parents of our students, politicians, philanthropists and many others. It attracts interesting and talented students who take full advantage of the opportunities that the school offers, supporting each other and treating staff members with respect.

ULMaS is an extremely inclusive and tolerant community whose members have a strong sense of belonging as well as a deep seated sense of purpose. Our community is varied, tolerant and inclusive. Students are treated with respect and encouraged to be themselves and to feel at home when in school. They are expected to develop rapidly in their maturity and to behave as responsible young adults in a culture of mutual respect.

What is it like working at ULMaS?

The small size of our school (approximately 100 students and 18 staff members) means that staff members take on multiple roles and responsibilities and are flexible in their approach to work. All members of staff in this school have a significant role in supporting students, ensuring that students are safe and cared for at all times. We are both a large family and a small professional organisation. Life is often fun, never dull and sometimes very busy: as a small team we keep a lot of plates spinning!

Why mentor Axiom Maths?

The mission of Axiom Maths is to help every child with the heart and head for maths realise the potential of their power. That mission rests on two powerful truths:

1. That maths gives us power: to see beyond what others see, to solve unsolvable challenges.
2. That this power is for everybody, regardless of your background.

These truths drive everything we do. They are our axioms. That's why we're called Axiom Maths. [Find out more here.](#)

What is a Maths Circle?

In an Axiom Maths Circle, a small group of students come together with an experienced, knowledgeable mentor to grapple with intriguing questions, to discover and explore exciting ideas, and to learn to think like advanced mathematicians. Maths Circles develop students' mathematical reasoning and expand their mathematical curiosity, as well as refining their technical knowledge and skills.

Mentors are key to this process. They sit at the heart of the maths circle, facilitating conversations around the problems at hand, and fostering a supportive and intellectually stimulating environment. Mentors needn't be mathematicians, but having STEM-related

backgrounds and through careful reading of the curriculum materials, they are equipped to aid our students on their mathematical journeys.

Job description

Post title	Axiom Maths Tutor
Responsible to	Lead Tutor/Supervisor

Role outline

The key responsibilities of the post are:

- Provide maths mentoring for small groups of students (6-8) of high school age, based in Merseyside.
- Reflect on the progress of students via weekly feedback forms and discussion with the lead mentor.
- Engage with training materials provided via the Learning Management System/ LMS. This is a weekly commitment that you will be paid for- thus it will be monitored.
- Nurture a positive, safe and enjoyable environment within your circle to forward students' understanding and enthusiasm for a myriad of topics.

Further Details of Responsibilities

Mentoring

Mentors should embody the ABC principles in their training, preparation and implementation of maths circle materials.

- **A**dvance plan sessions. Read over materials beforehand, try the questions, read over and watch guidance materials.
- **B**ring out the maths from the students. Ask questions to interrogate students' understanding. Guide students through the session, don't show them the way. Give students the opportunity to think and grow independently of mentor help.
- **C**atalyse conversations as a collective and individually. Foster an environment in which students thoughtfully plan their answers, and aren't afraid to make mistakes. Model and use precise vocabulary. Encourage students to work together.

Mentors are asked to keep a weekly register and provide short feedback on how students are progressing, occasionally, mentors may be asked to complete a weekly feedback form.

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
Education/qualification and training			
GCSE English at grade C / 4 or equivalent international English qualification		X	AP
Excellent understanding of mathematical reasoning evidenced through success in academic mathematics at degree level. This might include graduates or current undergraduate or graduate students in disciplines such as mathematics, physics, engineering and computer science.	X		AP I R
Experience			
Experience of discussing mathematics with groups of young people.		X	AP
Knowledge/skills			
Excellent oral and interpersonal skills with the ability to communicate clearly and appropriately	X		AP, I, R
Excellent organisational skills, including keen attention to detail and the ability to maintain accurate records such as registers and notes	X		AP, I, R
Strong understanding of the process of mathematical discovery (axioms, assumptions, deduction, proof, theorems, ...)	X		AP, I
Personal characteristics/other requirements			
Proactive in approach to work: a planner who takes their responsibilities seriously	X		AP, I, R
A friendly and reassuring presence who inspires confidence and ease when working with groups of young teenage students	X		AP, I, R

Openness to thinking about mathematics in new ways and considering students' perspectives and ideas thoughtfully and non judgmentally	X		
Ability to work constructively and flexibly with colleagues delivering Axiom Maths Circles	X		AP, I, R
High levels of integrity and commitment to ensuring safeguarding regulations and key teaching approaches are observed properly	X		AP, I, R
Very reliable and in good health	X		I, R

Disclosure

This school is committed to safeguarding and promoting the welfare of children, young people and expects all staff and volunteers to share this commitment. This position is exempt from the Rehabilitation of Offenders Act (1974). As such, shortlisted candidates will be required to declare full details of any criminal background, regardless of whether the conviction is spent, and the College will be required to apply for a standard or enhanced disclosure (a criminal records check) from the Disclosure and Barring Service in relation to the successful candidate.

A criminal record will only be taken into account for recruitment purposes, where the conviction is relevant to the position being applied for, and whether this is the case, will not necessarily bar candidates from employment. Any decision will depend on the precise nature of the work, the circumstances and background to the offence(s). The same procedure will be followed for College staff applying internally for a vacancy.

Applicants should note that it is an offence to apply for the role if the applicant is barred from engaging in regulated activity relevant to children.

Further information about the Disclosure scheme can be found at: www.gov.uk/dbs

The school's Child Protection Policy (including the Safer Recruitment policy) is available here: <https://liverpoolmathsschool.org/policies/>

Equal opportunities

University of Liverpool 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.