

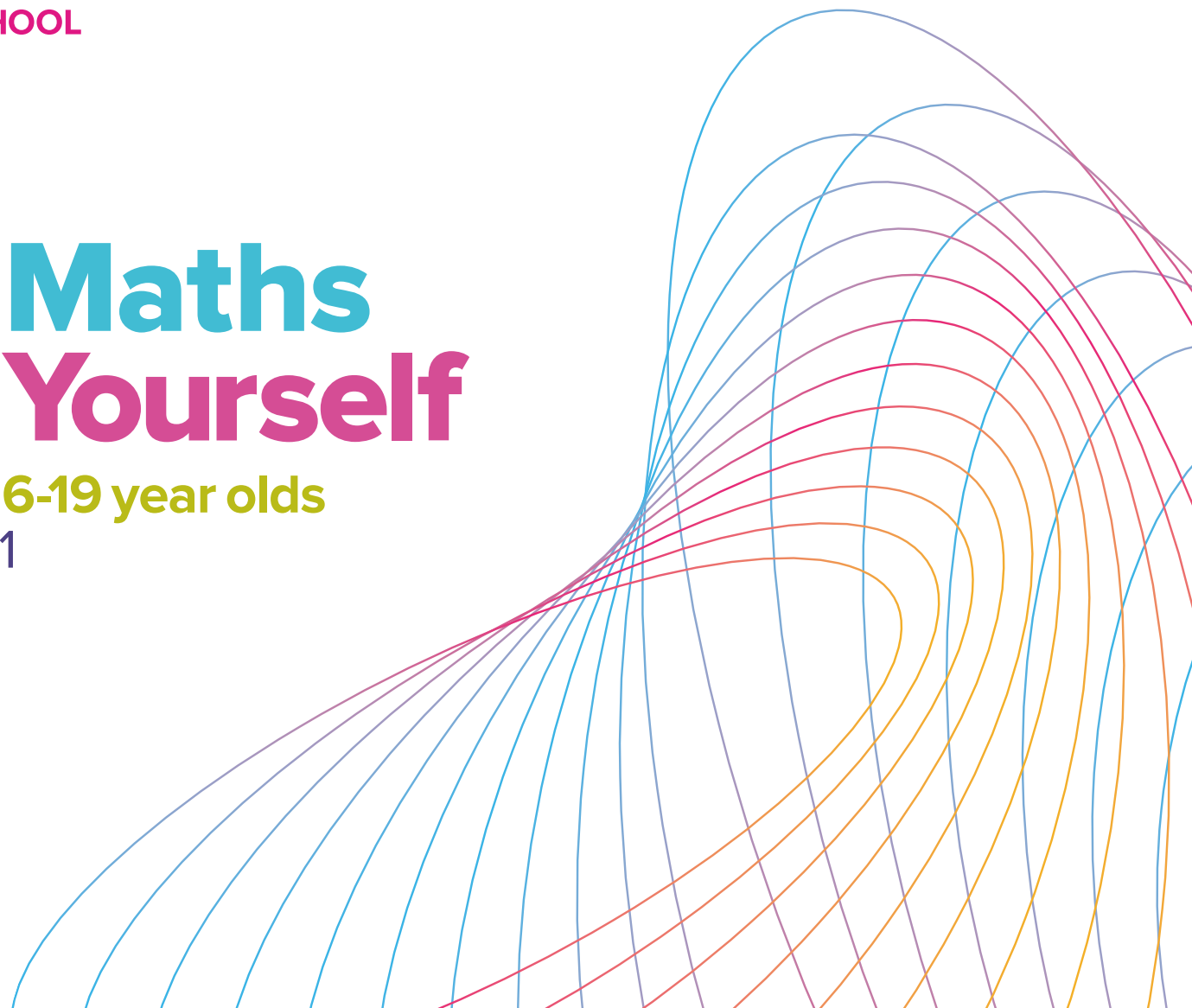


UNIVERSITY OF
LIVERPOOL
MATHS SCHOOL

Think Maths **Prove Yourself**

Education for 16-19 year olds

Prospectus 2021



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Headteacher's welcome

The University of Liverpool Maths School welcomed its first students in September 2020 and is already an inspiring school in which to study and teach. Our staff feel privileged to work with a student body made up of interesting, talented and highly committed young people. The students reciprocate by taking great pride in their school, by expressing gratitude for the excellent teaching and pastoral care and, above all, by working hard and learning rapidly.

As a school we are united by our enjoyment of reasoning and by our strong sense of belonging to this special place. This is all the more remarkable given that, at the time of writing, we have worked together for less than two months.

We believe that young people with a flair for mathematical and scientific thinking are precious and should be nurtured with great care by enthusiastic, clever staff members.

Our students benefit from an ethos that blends high expectations and hard work with informal, supportive relationships and a great deal of fun.

If you share our sense of adventure around learning, aspire to be challenged to think mathematically, and are willing to put in the effort required to achieve success then we'd like to meet you.

Damian Haigh
Headteacher



I know how fortunate I am to be the headteacher of this very special school. It is a delight every day to see talented and hardworking students thriving and never having to hide their enthusiasm for abstract understanding. As a maths teacher I have often thought that the brightest and most committed students get the worst deal in school, being put in a large top set and often not given the individual attention and challenge that they need. We are very fortunate in this school in being given the opportunity to provide that bespoke support for our students. I am doubly fortunate in that I also get the opportunity to work with some of the best staff I have ever met. They are a special mix of cleverness and professionalism, but above all they are great fun to be with.

In this school they can be the teachers and carers they want to be – working hard with great students but not stressed and not distracted by poor behaviour.

We provide inspiration and expert support to provide the right kind of challenge and inspiration for our students: to prepare them properly for places on challenging degree courses and to teach them much more than just the content of the A-Level specifications.

We don't teach students to pass examinations here: we teach them to understand the subjects to the point where the examination becomes a formality. As soon as our students join us, they start work on a variety of challenging problems and research tasks.

They learn to think and talk in rigorous, mathematical ways. They quickly start to enjoy this and to support each other's learning as part of the process.

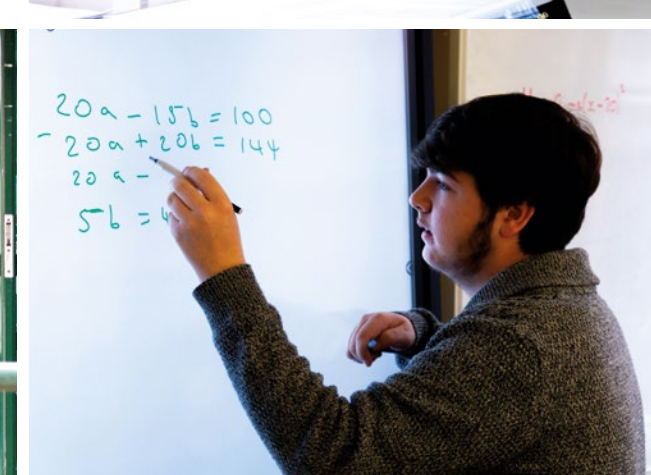
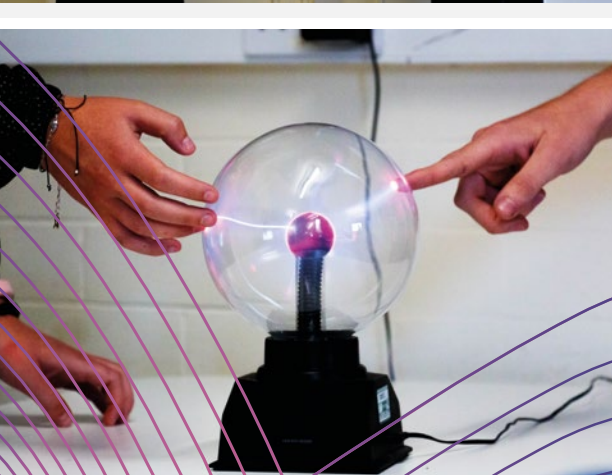
An education at the University of Liverpool Maths School is certainly challenging, but our students will also tell you that it's deeply rewarding, huge fun and utterly transformative. You can hear what they have to say on our YouTube channel, and we'd love to welcome you to a tour of our school building as well – more details are on our website.

Our mission

We exist to enable children with a strong interest and high potential in the mathematical sciences to achieve global impact.

We prepare them thoroughly and comprehensively for Science, Technology, Engineering and Mathematics (STEM) degrees and significant roles both within local communities and the global community of STEM. Our students will be equipped to become tomorrow's industrial and academic researchers, innovators who will address the world's greatest challenges, teachers who will inspire the next generation, wealth creators, entrepreneurs and problem solvers.

Our mission goes beyond just our students. We aim to support and nurture students across the Liverpool City Region with our outreach programme to ensure all can succeed in the mathematical sciences. We will support students, teachers and schools in the delivery of mathematics.



Why choose our Maths School?

1

Think Maths

I decided to study at the maths school because I loved the idea of being in a school full of like minded people who will challenge each other and work together to create a healthy environment.

Drew, Year 12

previously from Merchant Taylors' Girl's School

By becoming an expert in the mathematical sciences you can access highly paid, stimulating careers that benefit human society. It is also great fun to learn mathematics at a high level: mathematics is full of intrigue, creativity and satisfying challenges.

2

Think Solutions

You have fantastic teachers who are always happy to help with your work, or discuss topics far beyond the reaches of A-Level. You're given everything you need to succeed, and a bunch of extra opportunities on top of that!

Zoe, Year 12

previously from The Oldershaw Academy

Problem solving is not only satisfying but makes graduates highly employable. We develop the skills to find solutions and develop independent thinking and analytical skills. Developing mathematical and scientific thinking is about much more than getting high marks in exams: discussion, reflection, clarification and questioning are all crucial parts of the process.

3

Prove Yourself

It is so easy to make friends as everyone has similar interests. I am loving being challenged and the fact that the school goes beyond the curriculum to prepare you for university during the Aspiring Mathematician Programme (AMP) lessons.

Hannah, Year 12

previously from Archbishop Blanch School

Our students are in a place with others who share their passions. The community feeling is supportive and students are able to be themselves, try new experiences and immerse themselves fully in their subjects.

4

University Feel

The school feels more like a university than Sixth form because it provides us with the knowledge we need whilst also developing increasing levels of independence. This closes the gap between sixth form and university so when we leave we are prepared and have an advantage over others. Using teacher's first names helps underline this difference to schools.

Cameron, Year 12,

previously from Holy Family Catholic High School

We are on campus and have links to University of Liverpool departments and facilities. The feel of the building itself is very university like, in both the classrooms and the communal areas. The mutual respect between staff and students, all on first name terms, helps students to develop maturity and independence in their approach to study.

5

Challenging and Enriching

I wanted to be surrounded by people who are like minded and constantly strive to be better. I wanted to be in a learning environment that showed me how to exceed my own expectations.

Nick, Year 12

previously from Wade Deacon High School

By getting the level of challenge right we enable students to develop quickly, make important connections between related ideas and feel fully immersed in their learning. Students work hard but enjoy their work because of their strong sense of growing mastery.

6

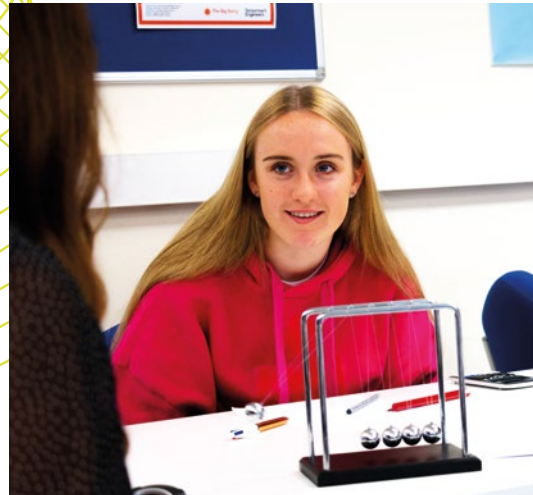
Immersive Curriculum With No Fee

The environment is perfect and what I've always dreamed to be a part of. When I saw ULMaS opening for September 2020 I immediately wanted to apply! This a perfect school for anyone who wants to study Maths, Physics and Computer Science.

Aiden, Year 12

previously from St Edmund Arrowsmith Catholic High School

Our teachers have a strong sense of privilege in working with committed and talented students. As all students study the same subjects we can ensure the curriculum structure enhances their experience and brings depth to their learning. In spite of the small class sizes and personalised approach, there are no charges to study at our school.



Developing potential

We develop mathematical and scientific potential wherever it is found, and remove the barriers that could prevent students from achieving highly. We believe in equality of access.

Sense of belonging

We believe that a strong sense of belonging is essential. Our school is a sociable, happy place where all students establish friendships that will last a lifetime; they are accepted and valued unconditionally. Our staff are a resilient, positive team fulfilled by their work, clear in their purpose; supported, challenged and nurtured by each other.

Our students

The Maths School is for students from Merseyside and the North West who love problem solving and analytical thinking and don't need a disciplinarian approach in order to be motivated. Our students thrive in a family environment where high expectations are implicit and both learning and wellbeing are carefully nurtured.

Wide scope of learning opportunity

Our formal, examined curriculum is firmly scientific but the curriculum we deliver goes far beyond this. Our broader curriculum inspires and cultivates a love of the arts and the humanities. As young people who will grow into influential adults, we believe it important that they care about politics, understand history and take seriously their responsibility to make the world a better place.

Academic experts

We provide a suitably challenging and enriching A-Level curriculum, structured to complement and enrich the other subjects, taught by academic experts which enables our students to access the most demanding and exclusive degree courses and careers in STEM.

Relationship with the University of Liverpool

Through our connection to the University of Liverpool we can provide a unique exposure to university life and academic expertise. We have access to University of Liverpool facilities and regularly call on academics and students to enrich the learning of our students in both their subjects and extracurricular pursuits.

Ethos

We provide an exceptional learning experience that inspires our students to become outstanding mathematical scientists with a well-developed moral purpose and an appreciation of their role in making the world a better place. The success of Exeter Maths School and King's Maths School has demonstrated how effective this approach is.

I think the Maths School is the best place for me to achieve well because of the Aspiring Mathematician Programme and the university entrance exam questions that we go over in class. I enjoy how fast the days go, you are doing subjects you enjoy so every lesson goes really fast.

Caleb, Year 12
previously from Holy Family Catholic High School

Why Maths Schools?

Maths Schools supported by universities in the UK started with both Exeter Mathematics School and King's College, London Maths School in 2014. The University of Liverpool Maths School is the third to open in the UK, and the first in the North.

What do students get from a Maths School education?

A Maths School education is a transformative experience. It turns an interest in mathematics into a lasting, energising passion for the mathematical sciences. It enables students to learn in a welcoming, curious and enthusiastic community. It leaves them with the doors of opportunity wide open, ready to help solve the world's great problems.

Dan Abramson
Headteacher at King's Maths School

It's no exaggeration to claim that joining a maths school is transformational and life affirming. Working in a supportive environment with like-minded peers, exploring the subjects they love, students form lasting friendships and go on to achieve more than they believed possible. Maths Schools are very special places of inspiration, joy and, of course, lots of maths!

Kerry Burnham
Headteacher at Exeter Maths School

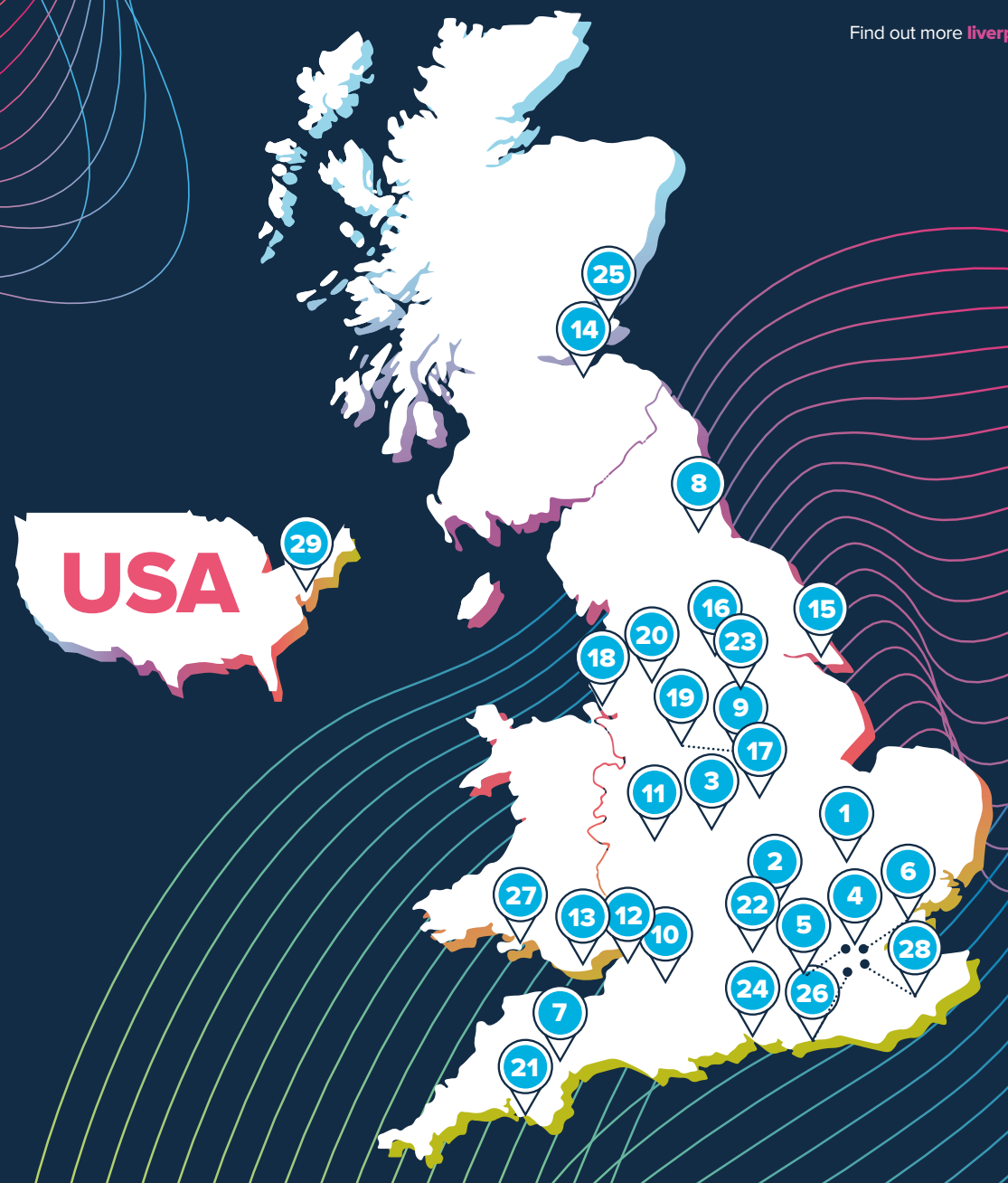


Both King's and Exeter have shown just how inspirational focusing on the mathematical A-Levels can be, with students achieving above targets and going onto study the key shortage subjects in the country and becoming a valuable part of society.

Results 2019

Both existing maths schools achieved an average grade A in their subjects in 2019. Alongside this is the progress measure, how much better each student does on average compared to a target based on GCSE grades. These schools are in the top 5% nationally for progress.

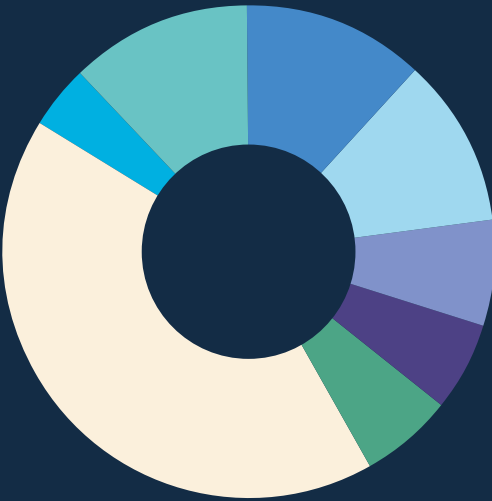
Maths schools achieve far beyond targets. Exeter achieved a progress score of +0.79 and King's +0.93, both of which are exceptionally high and show students achieve a grade above target in most subjects. This underlines that the Maths School delivery model has a great impact on achievement, and this is alongside the other opportunities within the school for personal development.



Exeter and King's Destinations 2020

- | | |
|------------------------------|--------------------------------|
| 1. Cambridge | 15. Hull |
| 2. Oxford | 16. Leeds |
| 3. Warwick | 17. Leicester |
| 4. King's College London | 18. Liverpool |
| 5. University College London | 19. Loughborough |
| 6. Imperial | 20. Manchester |
| 7. Exeter | 21. Plymouth |
| 8. Durham | 22. Reading |
| 9. Nottingham | 23. Sheffield |
| 10. Bath | 24. Southampton |
| 11. Birmingham | 25. St Andrews |
| 12. Bristol | 26. Surrey |
| 13. Cardiff | 27. Swansea |
| 14. Edinburgh | 28. London School of Economics |
| | 29. Princeton (USA) |

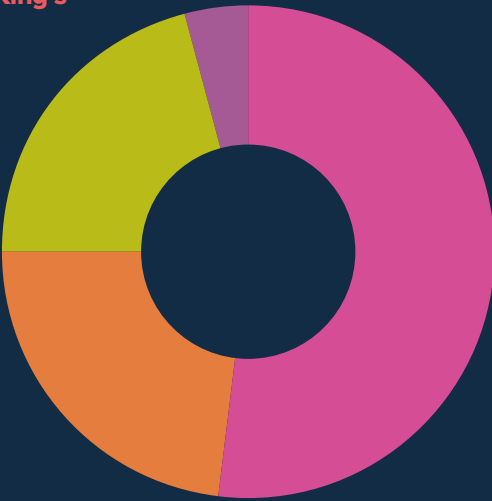
Combined Destinations from Exeter and King's Maths Schools



- Oxford
- Warwick
- Cambridge
- Imperial
- Durham
- Own linked University
- Other University
- Other destinations

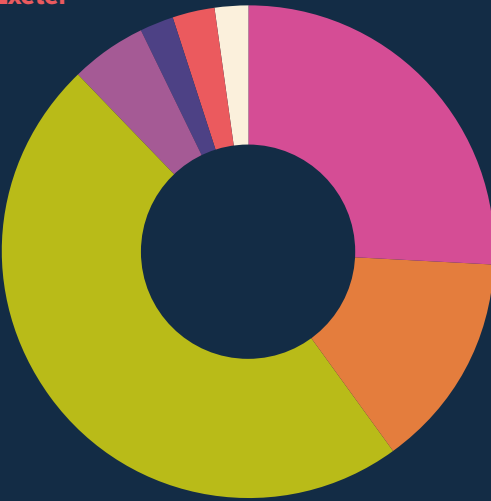
What subjects did Students go on to study in 2020?

King's

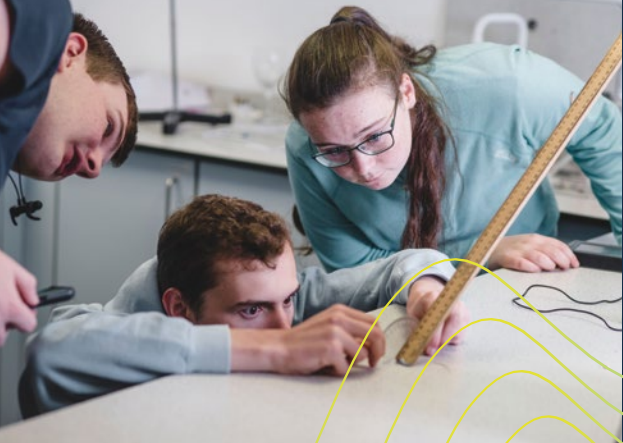
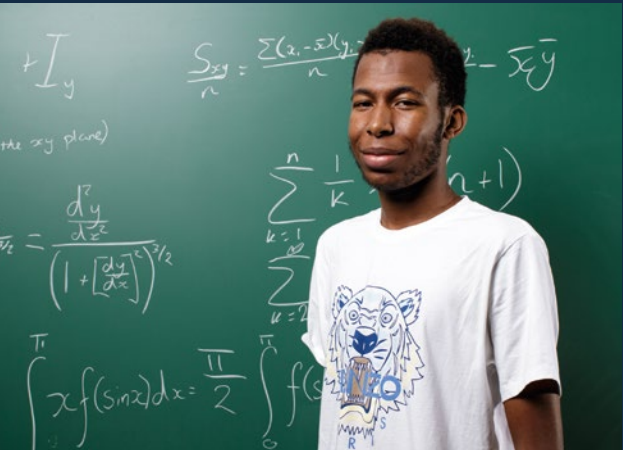


- Mathematics
- Computer Science
- Physics / Engineering
- Economics

Exeter



- Mathematics
- Computer Science
- Physics / Engineering
- Apprenticeship
- Operating Dept Practice
- Chemistry
- Geology



Find out more liverpoolmathsschool.org E: admissions@liverpoolmathsschool.org



Teachers will always make sure to push you further than you thought you could go. I don't think I would have done as well as I have without that support.

Tyler 2016-2018 (King's)

I liked that the teaching wasn't solely focused on getting the best grades, but rather understanding the concepts and how they were reached. This kind of thinking has definitely helped throughout my degree so far.

Shauna 2016-2018 (King's)



I really enjoyed the tight knit nature of the school and how easy it was to make friends with other like minded individuals. I also liked how caring the teachers were of us academically and personally.

Alex 2014-2016 (King's)

Although King's Maths School excels in its mathematical nature, I appreciated the support with bridging the gap to university and the opportunities provided to assist that.

Shay 2018-2020 (King's)



I loved the way that teachers encouraged us to be curious about maths, and being part of a community of incredibly intelligent students really challenged me and pushed me to do my best.

Andrea 2015-2017 (King's)

I think the best things about King's was that it is a very united school, and over the course of the two years you get to know everybody there really well.

Irina 2017-2019 (King's)



Maths School was a place where I could totally be myself because every student had the same passion for mathematics.

Heather 2017-2019 (Exeter)

I couldn't have been happier! The work was intense, but there wasn't a lesson I dreaded. I learnt far more than I could have imagined, and I really enjoyed the way I was taught and made lifelong bonds with other students.

Frances 2018-2020 (Exeter)



Studying at Exeter Maths School was the best possible way I could have spent my college years. The support we received was unrivalled. I am forever grateful the school was there when I needed it.

Lily 2015-2017 (Exeter)

A place where I could truly be myself. Wonderful and enthusiastic teachers and excellent preparation for university mathematics.

Timothy 2015-2017 (Exeter)



I often look back fondly at my years at the Exeter Maths School as some of the best, most formative years of my life. The experiences I had and the skills I gained aided in my development as a scientist and have stuck with me through my time at uni.

Cayenne 2015-2017 (Exeter)

Learning in an environment where every idea you have is an opportunity your teachers and peers would explore with you changed everything.

Daniel 2016-2018 (Exeter)

Sixth Form life at the University of Liverpool Maths School



ONE OF THE GREAT ADVANTAGES OF BEING IN A SMALL SCHOOL IS THAT EVERY MEMBER OF STAFF CAN GET TO KNOW EVERY STUDENT WELL.

Much more than maths

Our expert careers advice and pastoral care ensures that every student receives the support they need to reach their full potential. Individual guidance and coaching assists their personal, social and academic development, providing students with the skill set required to surpass their potential and progress beyond A-Level. All of our students have access to a range of University of Liverpool facilities, including two libraries, a sports centre and cafes plus music concerts and performances.

Induction

When students join us they take part in an induction programme which ensures that students are established socially and well prepared for the forthcoming academic challenge. Students will also be encouraged to attend a number of events at school before starting in September.

These could include:

- + A taster day event
- + A visit to the Sir Alastair Pilkington Building
- + Attendance at outreach courses
- + Joining other applicants for social events such as film nights and games evenings.

Pastoral support

One of the great advantages of being in a small school is that every member of staff can get to know every student well. The sense of being part of a team, a valued member of a cohesive community, is a crucial part of everyone's wellbeing and development, and we aim to ensure that for all our students. Our small classes, informal family ethos and our shared interests mean that we are a close-knit school where students feel safe and know that both the staff and their peers have their best interests at heart.

Every student has a Pastoral Tutor who supports them if they have any concerns or personal difficulties, and guides them through their courses, work experience and UCAS or job applications.

We will also have support staff who will be trained in counselling, safeguarding, special educational needs and pastoral care. Our Pastoral Lead oversees a team of Pastoral Tutors. Every student sees their Pastoral Tutor most days as part of a tutor-group meeting, and they have a one to one meeting with them every fortnight.

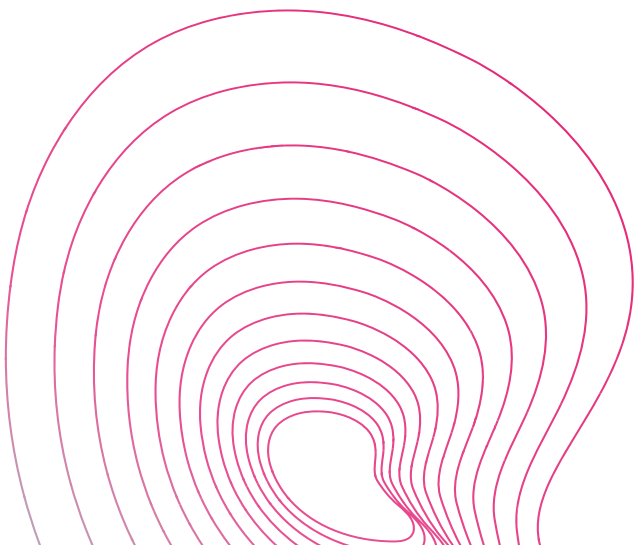
Students who are experiencing difficulties are given more intensive support by their Pastoral Tutor and other staff members. Where necessary, parents/ carers are contacted and we work closely with them.

Facilities

We are currently on the university campus in the refurbished Sir Alastair Pilkington Building. In September 2022 we will move to a brand new purpose-built building on Grove Street. You will study in this brand new building which is designed to maximise your enjoyment of the Maths School experience.

I like the positivity and help our teachers can provide. I also like the pupils I'm around because they're polite and for their enthusiasm for maths. I also like the sports we do here.

Ibrahim, Year 12
previously from Calderstones School



Sir Alastair Pilkington Building Study Area – Up to July 2022

4 floors of dedicated facilities:

- + Classrooms with latest IT technology
- + ICT suite and laptops
- + Break out spaces and common rooms for relaxing and working outside classes
- + Study zones for individual and group work
- + Group activity and seminar rooms
- + 2 science labs to support practical physics sessions
- + Kitchen facilities for use by students
- + Dedicated reception
- + Secure and controlled building access.

New Building from September 2022

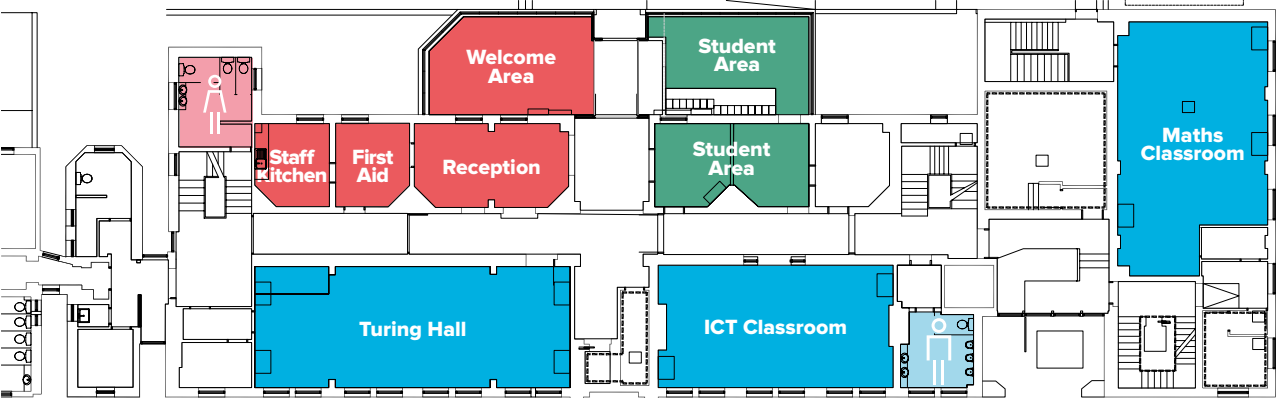
4 floors designed exclusively for the Maths School:

- + Developed to be the perfect accommodation for the Maths school
- + Directly adjacent to the University of Liverpool campus
- + 4 floors of modern facilities
- + Cutting edge technology in classrooms
- + Physics laboratories, computer science suites, classrooms, student study areas, library
- + Rooftop sports pitch
- + Kitchen facilities for use by students.

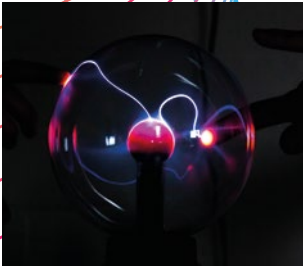


Sir Alastair Pilkington Building

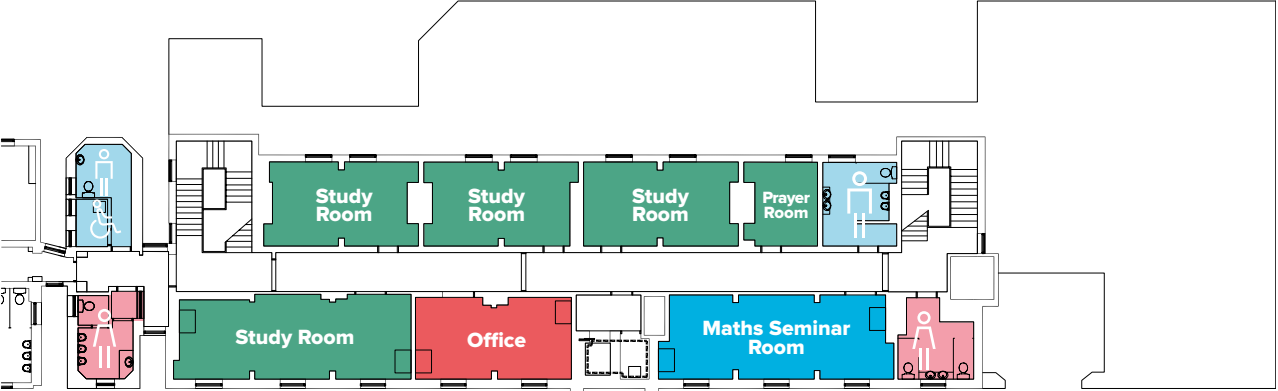
Ground Floor



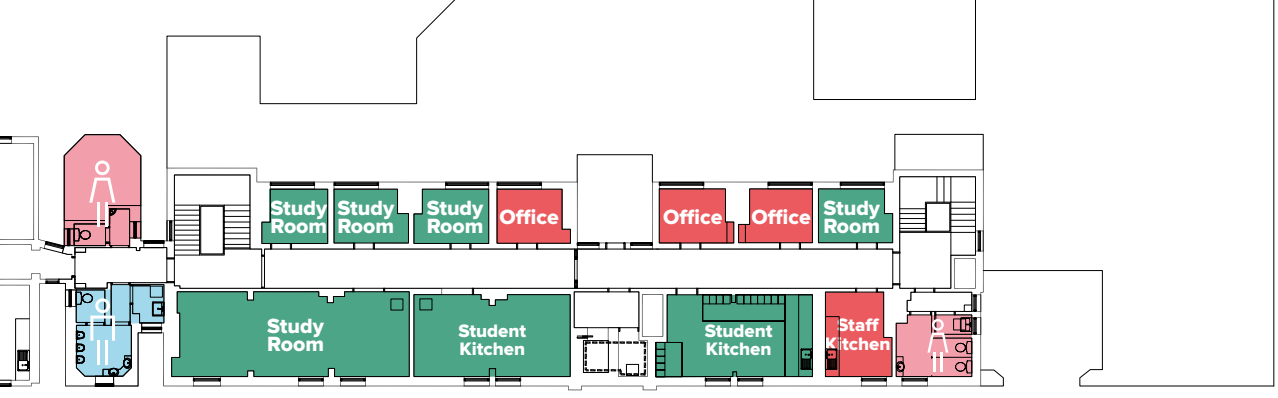
First Floor



Second Floor



Third Floor



Your study programme

All students will be enrolled onto A-Level courses in Mathematics, Further Mathematics and Physics and Computer Science, delivered by excellent teachers with strong academic pedigrees.

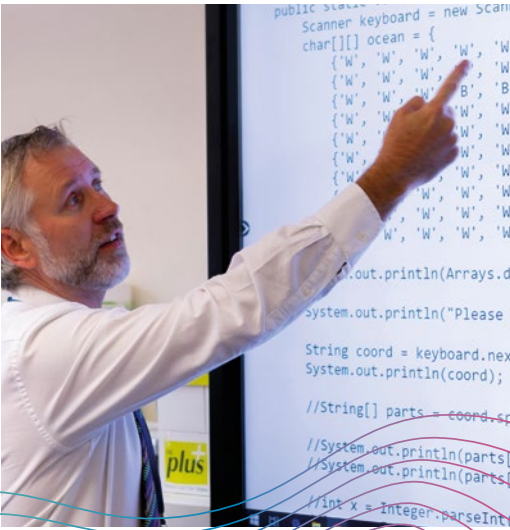
Although all students start on a four A-Level route, we discuss with them whether they will pursue all four courses to completion as part of the UCAS process. From the outset we will be challenging our students to reason formally, connect ideas, solve challenging problems and compose and examine mathematical proofs. As well as developing our students' formal analytical skills we will also be ensuring they develop their communication abilities through presentations, different styles of writing and a broad programme of reading.

The unique situation we are in with all students studying the same subjects gives us a wonderful opportunity to support and deepen their knowledge. We can co-ordinate the teaching, for example functions in Maths and Computer Science and also mechanics in Physics and Maths. Rather than being delivered in separate silos, the 4 A-Level courses, the AMP and PPEP intertwine and support each other.

The curriculum programme will be as follows:

- + 5 lessons per week for A-Level and AS subjects (this may vary across a 2 year course)
- + A weekly problem solving session (as part of the AMP)
- + A weekly Pastoral and Personal Enrichment Programme taught session (PPEP)
- + Weekly exercise sessions at Sport Liverpool
- + Regular involvement in at least one school club / society (PPEP)
- + Regular visiting speakers and research projects.

The following timetable gives a flavour of a typical Year 12 student's week; timings and structure of the timetable are approximate and will be subject to change.



A typical timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30am	[Staff Meeting/CPD]	Maths (Core Units)	Computer Science	Physics Feedback Lesson	Maths (Applied Units) Feedback Lesson
10:30am	Maths (Core Units)	Computer Science Feedback Lesson	Physics	Maths (Applied Units)	AMP / PPEP/ Individual Study
11:30am	Break	Break	Break	Break	Break
11:45am	Computer Science	AMP / PPEP/ Individual Study	Maths (Applied Units)	AMP / PPEP/ Individual Study	Maths (Core Units)
12:45pm	Lunch / Extra Curricular	Lunch / Extra Curricular	Lunch / Extra Curricular	Lunch / Extra Curricular	Lunch / Extra Curricular
1:45pm	Physics Feedback Lesson	Maths (Applied Units)		Computer Science	Physics
2:45pm	Break	Break	Maths (Core Units)	Break	Break
3:00pm	Pastoral Period	Pastoral Period	Pastoral Period	Pastoral Period	Pastoral Period
3:30pm	Maths (Applied Units)	Maths (Core Units)	Computer Science	Physics	
4:30pm	Extra Curricular	Extra Curricular	Extra Curricular	Extra Curricular	Extra Curricular – School Sport

Course information

Mathematics and Further Mathematics (A-Level)

Awarding Body and Specification: OCR B (MEI)

Each A-Level will be assessed by examinations at the end of the course.

For A-Level Mathematics these will be:

- ✚ Component 01: Pure Mathematics and Mechanics – 100 marks;
- ✚ Component 02: Pure Mathematics and Statistics – 100 marks;
- ✚ Component 03: Pure Mathematics and Comprehension – 75 marks.

For Further Mathematics, 50% of the grade will be assessed in the paper “Core Pure”. Students will also be assessed by examination on their chosen modules. All students study the same three courses in Year 12.

Maths Alpha (α)
Pure mathematics and statistics

Maths Beta (β)
Pure mathematics and mechanics

Maths Delta (δ)
Pure mathematics

These courses will cover the entirety of the A-Level curriculum and some of the Further Mathematics curriculum, including complex numbers, matrices and proof. All students will then follow the course Maths Omega (Ω). This will review work from Year 12, complete the remaining compulsory content for “Core Pure” and will also include topics that extend beyond the required curriculum.

In my mind I had the idea that being surrounded by other people who are really good at maths was going to be mundane and boring and that all of the students were going to be stereotypical ‘nerds’ with few interests beyond maths but I couldn’t have been more wrong. Everyone is very social, kind, open, friendly, funny and everyone has their own interests that stretch way beyond maths.

George, Year 12
previously from Liverpool College

Students will also elect to study either one Major and one Minor unit or three Minor units from the table below.

Major Units (33.3%)	Minor Units (16.7%)
Mechanics	Mechanics
Statistics	Statistics
	Further Pure with Technology
	Numerical Methods
	Modelling with Algorithms
	Extra Pure



Physics (A-Level)

Awarding Body and Specification: AQA

Physics is at the heart of everything. You’ll delve inside the nucleus to discover sub-atomic particles, consider the true nature of light and how its properties may be exploited, and develop a deeper understanding of the laws of physics underpinning the working’s of the universe. It’s a course to develop your imagination, investigative skills and mathematical ability – attributes that are recognised as an asset for a successful career in any field.

A-Level Physics comprises of the following core content:

1. Measurements and their errors
2. Particles and radiation
3. Waves
4. Mechanics and materials
5. Electricity
6. Further mechanics and thermal physics
7. Fields and their consequences
8. Nuclear physics
9. Astrophysics (other optional topics may be available)

At the end of the course, you should expect 3 exams of 2 hours of duration each, with short and long structured questions as well as multiple choice questions. The third paper will test your experimental skills (experimental questions using knowledge acquired in lessons during 12 compulsory practicals that will be performed over the 2 year course).

We will provide a high number of physics related extracurricular activities that will help prepare you for university. In particular, we plan to enable students to access Nuffield Research placements (university research projects during the Summer in year 12) and take part in a trip to Geneva (CERN) at the end of year 12.

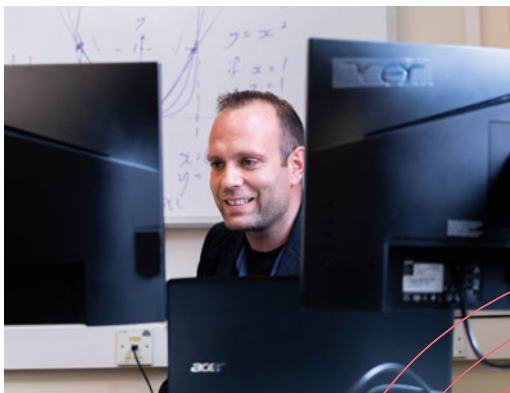
Computer Science (AS-Level or A-Level)

Awarding Body and Specification: OCR

Computing has been fundamental to many of the exciting scientific and technological advances of the 21st century; from modern conveniences such as Apple Pay, to DNA sequencing, or number-crunching data generated by the Large Hadron Collider.

Computing lessons will focus on developing the ability to think computationally, that is, to see the abstract structure of a situation in a way that can be dealt with by an algorithm, which can then be written as a program and executed by a computer. We will use computational problems from mathematics and physics to motivate key ideas in programming, such as loops, conditionals, data structures and data types. Topics such as set theory and graph theory, which lie within decision mathematics, find important applications when understanding how to write code that is efficient and reliable. The languages we will code in will include Java, Haskell, Python, SQL, HTML, CSS, Javascript, PHP, C, C++ and R.

Our students study both declarative functional programming languages and conventional imperative languages (both procedural and object oriented) and understand the important differences between them. Because our students study mathematics to a higher level, their programming skills will develop more rapidly. Their work in programming will also support their developing understanding of mathematics and problem solving.



Future professionals

Applying for University

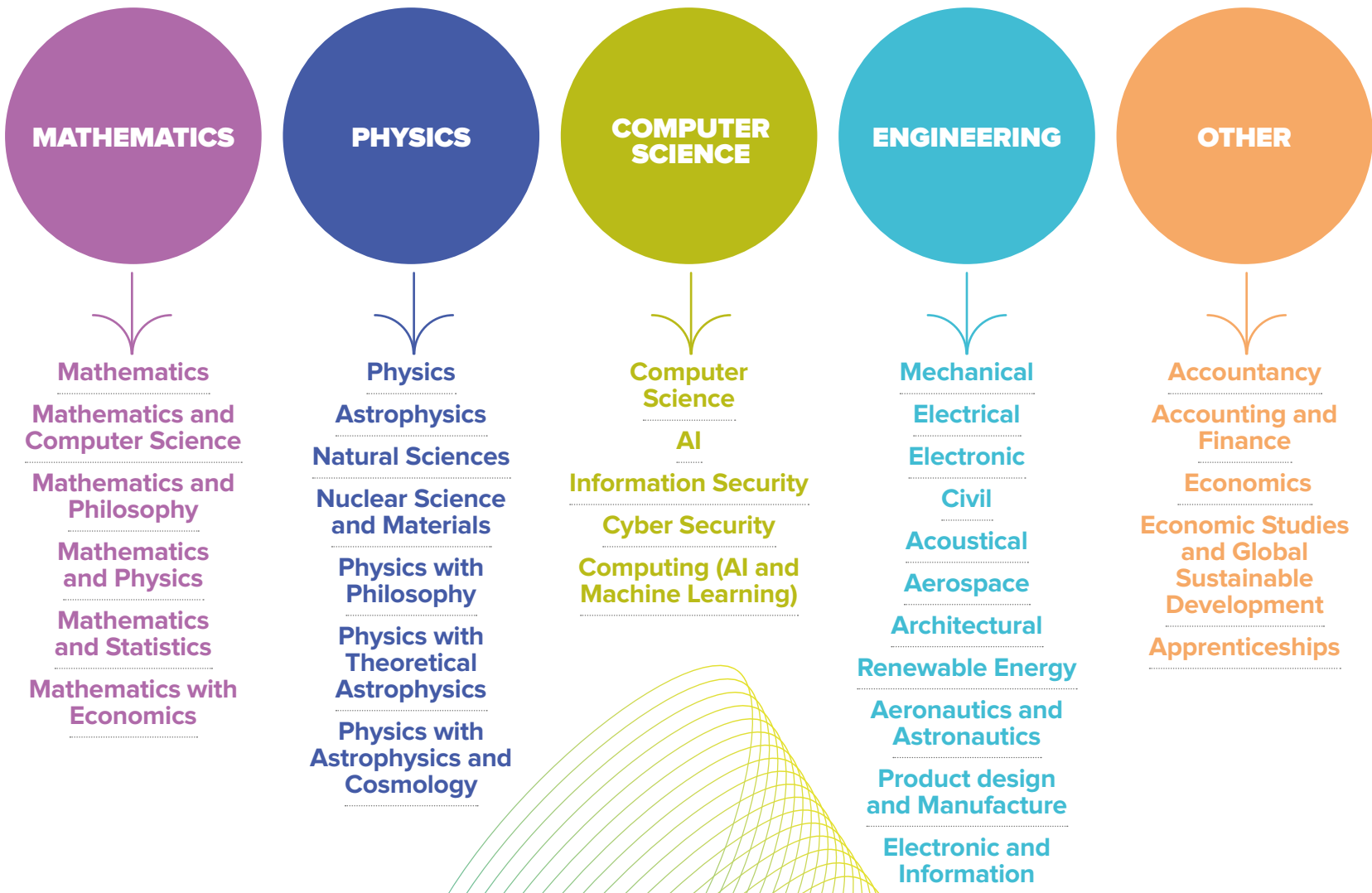
The A-Levels we teach give our students many options when considering what to study at university as shown on the right. Many of our students will go on to mathematics or physics degrees but some will choose to study engineering, economics, computer science, architecture or philosophy. Many of these subjects are needed to fulfill the workforce and academic needs of the local, national and international industries. The school's small classes, close links with the University of Liverpool and unique curriculum means that our students are extremely well supported with their university applications. Our students apply for a university degree course from the privileged position of already studying on the campus of a Russell Group university, supported by STEM experts and careers specialists. In addition to our unique curriculum our students benefit from advice from University Admissions Tutors, expert guidance on constructing impactful personal statements, opportunities to develop relevant and impressive research experience and academic skills as well as high level support with entrance exams, interviews and other challenges.

Put together this means that our students get the opportunity to live up to their full potential and demonstrate that potential to the universities they apply to. Students will also have a week of university experience during their time at ULMaS developed in collaboration with the University of Liverpool.

Career opportunities

We study and teach the mathematical sciences because of their power and their beauty but the power and utility of these subjects also confers a financial benefit. The A-Level courses we teach are those that seem to give the highest future earnings potential. STEM (science, technology, engineering and mathematics) experts are very highly sought-after by employers because of their well-developed technical and reasoning skills, their proven intelligence, their creativity and their problem solving capabilities. STEM graduates from prestigious universities are amongst the highest earning graduates and have privileged access to a very wide range of intellectually stimulating roles which are of great importance across the spectrum of industry and public service. We rely on STEM graduates to find solutions to the greatest challenges that face us in the world and to provide the innovations that support our scientific and economic development. Find out more here mathscareers.org.uk/career-profiles/

Subjects Students went to study in 2020 after Maths School (King's and Exeter Maths Schools)



Careers after university study

You can stay working in research as part of an academic institution like a university, or have a career elsewhere. The skills developed in studying mathematics, physics and computer science are in huge demand and highly transferable. They lead to a wide variety of fascinating careers.

Here are some examples, there are many more. Your skillset will make you highly employable in so many sectors.

Here, you'll be pushed to your limits, giving you a chance to grow far more than you would if limited to A-Level content. You'll have all the support and resources you need to develop at an exponential rate.

Zoe, Year 12
previously from
The Oldershaw Academy



Entry requirements

In order to succeed at the Maths School, we expect that students should be predicted to get a grade 8 or 9 in GCSE Maths and in GCSE Physics, or Combined Science. If you are predicted a grade 7 but feel that the Maths School is the place for you, then please get in touch to find out what additional support we can offer by emailing **E: admissions@liverpoolmathsschool.org**



BE PART OF
A TALENTED,
COMMITTED
AND ENJOYABLE
COMMUNITY.

The teachers here are so interested in our futures too which is very motivating, they have a love for the same subjects as us, and wanting to be here teaching us is great too. The support from them out of their free time is great.

Drew, Year 12
previously from Merchant Taylors' Girl's School

Enrichment opportunities

In addition to the examined A-Level Curriculum the school delivers:

- ✚ The Aspiring Mathematician Programme
- ✚ The Pastoral and Personal Enrichment Programme which includes opportunities for physical exercise, personal learning and development
- ✚ A broad ranging programme of extracurricular clubs and societies, many supported by university staff and students.

Teachers can focus on each individual student, if necessary. We can go to the teachers if we ever have a problem with the work and they're always willing to help.

Maisie, Year 12

previously from Notre Dame Catholic College

The Pastoral and Personal Enrichment Programme (PPEP)

As a school we want to ensure that students continue their love of learning within and beyond their subjects and are safe, healthy, happy and productive. The PPEP is a bespoke programme of tutorial meetings and group activities designed to meet the pastoral and personal enrichment needs of students in a maths school. The programme will be delivered through:

- ✚ Weekly meetings of tutorial groups of students with Pastoral Tutors, featuring sessions in a planned structure across the year and delivered by school staff and visiting speakers
- ✚ Weekly personal development lessons including induction, study skills, Personal, Social and Health Education (PSHE), Relationship and Sex Education (RSE) and British Values. Students will also learn about key issues for young people to be aware of, for example; discrimination, social mobility, leadership, progression information, road safety, finance, politics and economics

- ✚ Whole cohort opportunities after school and during the day including extra-curricular sports activities, healthy cooking opportunities, and cultural activities such as art gallery, theatre and concert visits. These will feature a programme of discussion and group-work activities that focus students' attention on the things they need to know as a part of the programme and foster the development of the school's intended ethos and community character
- ✚ Fortnightly one to one tutorial meetings between each individual student and their Pastoral Tutor. These will ensure that students are closely monitored and have an opportunity to discuss any concerns they have and request individual support with personal, academic or career issues. In these meetings tutors will monitor students' academic performance, personal development including their progress in reading, their communication skills and their time-management and team working skills
- ✚ Subject lessons where the PPEP content is relevant in the subject areas
- ✚ Form, lead and attend lunch time clubs.

Aspiring Mathematician Programme (AMP)

The AMP is a bespoke programme of activities designed to give students greater depth in their mathematical and scientific understanding, accelerated academic maturity and careers experiences which prepare them for work in Science, Technology, Engineering and Mathematics research and industry. For example, the programme will:

- ✚ Develop a range of academic and vocational skills and knowledge beyond those required at A-Level
- ✚ Prepare students for the UCAS application process and university interviews
- ✚ Push our students' mathematical thinking to the point where challenging assessments like the university entrance exams STEP and MAT start to feel like interesting puzzles rather than impossible challenges
- ✚ Develop students' experience of solving real life problems as well as examination questions
- ✚ Give students opportunities to be inspired by and work alongside academics, current undergraduates and researchers

The PPEP lessons have been helping us to find the best study methods for A-Levels and degrees. The AMP lessons are stretching me and preparing us for STEP/MAT exams that we will need to sit if we would like to go to Oxbridge.

Hannah, Year 12

previously from Archbishop Blanch School

- ✚ Facilitate students in the completion of at least one significant research task which culminates in an evening to showcase their outcomes
- ✚ Enhance students' ability to work in group related tasks and projects
- ✚ Broaden students' horizons in terms of their future career opportunities/aspirations by giving them genuinely valuable work experience and careers guidance
- ✚ Prepare students to take part in mathematics and science competitions like the UKMT Maths Challenges, the British Maths Olympiad and the British Physics Olympiad.

The AMP is delivered during mathematics, physics and computer science lessons and additional periods set aside for work with university researchers and the delivery of AMP content that does not fit in the mainstream curriculum.

Extracurricular clubs and societies

We run activities during lunchtimes. We encourage students to develop further recreational clubs and societies and will support such activities through resources and staffing where needed.

- ✚ Chess and other strategy/board games club
- ✚ French/ Italian/ Spanish/ Chinese societies, depending on demand
- ✚ Music appreciation, including attending the Wednesday lunchtime concerts at the Victoria Gallery and Museum and evening concerts at the Philharmonic
- ✚ Art club (art gallery visits, sketching, projects)
- ✚ Book club
- ✚ Debating & philosophical society
- ✚ Drama club
- ✚ Swimming, volleyball, basketball and other sporting opportunities.

University of Liverpool students and staff will be invited to help run some of these activities, arranged in line with the school's strict safeguarding arrangements.

Application Process

1

Come along to an event

Our events include everything from Open Evenings, Taster Days, Socials and Evening Classes. These are chances to find out what our school has to offer, meet like-minded students, do some maths and physics and decide if our school is the right place for you.

To get the most up to date information about event dates and to sign up, please visit our website and follow us on social media which we update regularly.

2

Engage with online lessons

We offer a range of enrichment to support students from Y5-13. You can see what is available on the link below as we offer specific support for GCSE students aiming for grades 7 and above liverpoolmathsschool.org/outreach-reaching-your-potential/

3

Complete our application form

All you have to do for now is complete an application form via our website. liverpoolmathsschool.org/apply/

If you need any help completing our application form please contact us.

Once we have processed your application, we will send you details about the arrangements for the aptitude test.

4

Take our aptitude test

The aptitude test is designed to help us see how you approach different types of problems and think about maths. You will be very familiar with the maths included in the test and it won't include topics from higher tier GCSE. After you apply you will receive information about how you can prepare in advance for the test. **Please apply early so we can support you with this.**

5

Come and talk to us about your ambitions for the future

You will then be invited to come in to do some maths with us, discuss why you want to study at the Maths School and find out whether we are the right sixth form for you. Meetings will take place within a month of you taking the aptitude test.

6

Review your conditional offer

Conditional offers will be issued shortly after you have come in for a discussion. These offers will set out the grades you need to achieve in your GCSEs in order to be accepted at the Maths School. If you are happy to accept your conditional offer, all you (or your parent/carer) need to do is email **E: admissions@liverpoolmathsschool.org**

7

Keep in touch

Ahead of receiving your GCSE results we will be in touch with regular updates and tips on how best to prepare for life at the Maths School. You are also welcome to contact us anytime with any queries that you may have. We also plan to run pre-enrolment events, including social events to help develop a community feel.

8

GCSE results day

If you get the GCSEs you need to meet your conditional offer, you should contact us to confirm that you want to take up your place at the Maths School. Don't panic if you don't get your predicted grades – please contact us as soon as you can to discuss your options.

9

Starting Sixth form

If you accept your place at the Maths School, we will send you all the information you need to help you get ready for the start of term in September 2020.

I knew from when I went to the outreach sessions last October that this was where I wanted to study my A-Levels. I received an overwhelming amount of support with my GCSEs and I knew it was the kind of place I wanted to be in.

Sophie, Year 12
previously from Range High School

Where do our Students come from, Year 12 2020-21

- 1 St Edmund Arrowsmith Catholic High School
- 2 Holy Family Catholic High School
- 3 Penketh High School
- 4 Birkdale High School
- 5 Merchant Taylors' Girls' School
- 6 Meols Cop High School
- 7 Wade Deacon High School
- 8 St Francis Xavier's College
- 9 Archbishop Blanch School
- 10 Calderstones School
- 11 The Heath School
- 12 Lord Derby Academy
- 13 Liverpool Life Sciences UTC
- 14 The Grange Academy
- 15 Ormskirk School
- 16 St John Bosco Arts College
- 17 Notre Dame Catholic College
- 18 Range High School
- 19 Broughton Hall Catholic High School
- 20 Liverpool College
- 21 The Oldershaw Academy



Location and Travel

The school is located on the University campus, within walking distance to the city centre and close to transport links and eateries. This means our students come from across the North West to get this unique and inspiring education.

Bus

The Maths School can be easily reached by multiple bus routes from right across the Liverpool City Region. We are immediately adjacent to the 75, 80 and 86 bus routes on Catharine Street, but also the city centre Bus Stations are only a 15 minute walk.

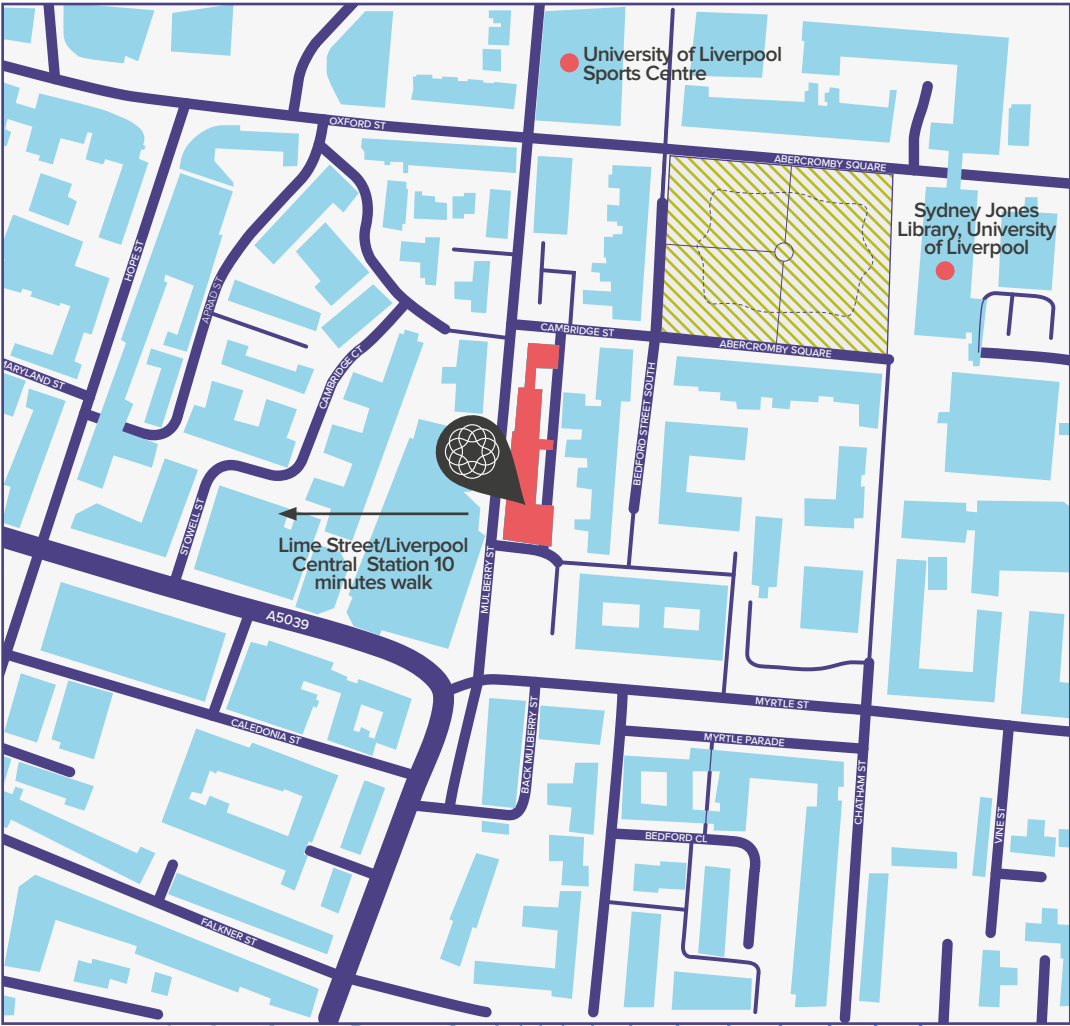


Liverpool Area Network Bus Map

I wanted to be challenged and I knew that the maths school would provide me with many incredible opportunities.

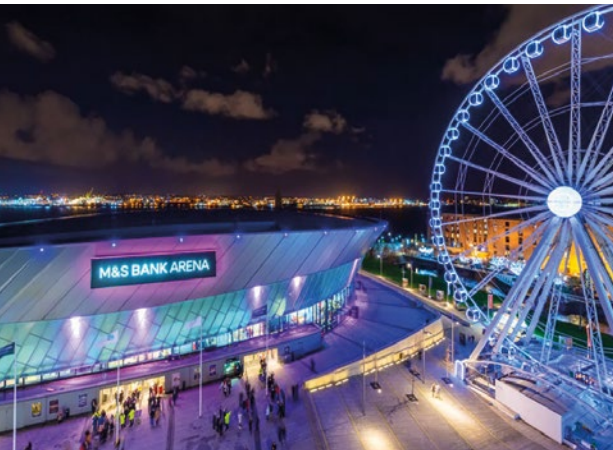
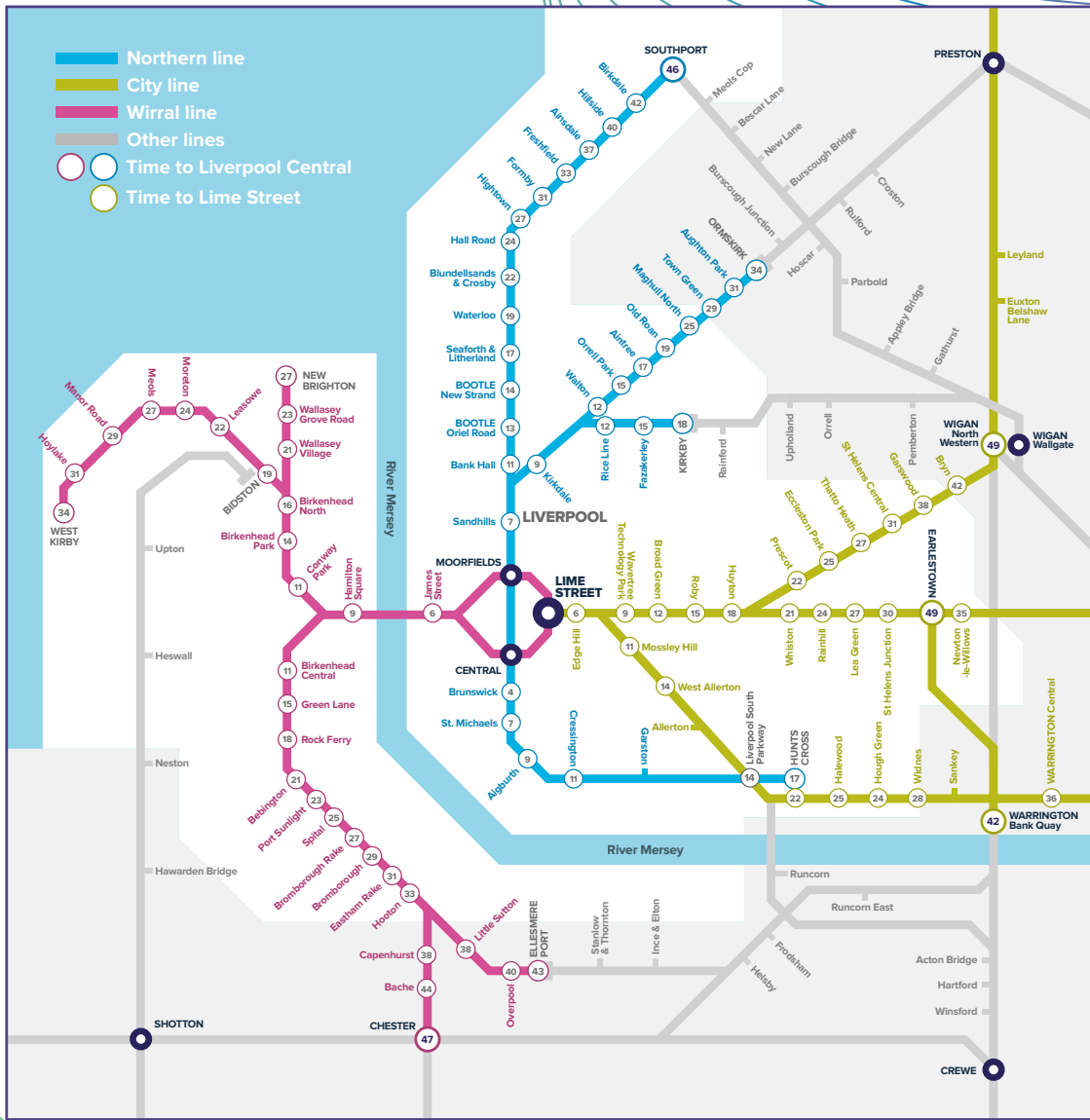
Hannah, Year 12
previously from Archbishop Blanch School

Sir Alastair Pilkington Building,
Mulberry Street, Liverpool, L69 7SH



Rail

We are a 15 minute walk from Liverpool Lime Street and Liverpool Central which help students from across the North West have easy access to the school.



University of Liverpool

Maths School

Prospectus 2021

Sir Alastair Pilkington Building,
Mulberry Street,
Liverpool,
L69 7SH

 [/livmathsschool/](https://www.instagram.com/livmathsschool/)

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Contact us

If you have any questions about the school, or you're interested in hearing more about upcoming events, please get in touch by emailing

E: admissions@liverpoolmathsschool.org

