



Twyford
C of E
High School

Twyford Advanced Programme (TAP)

The Twyford Advanced Programme consists of:

- The Oxbridge Programme**
- Medical Society**
- Engineering Society**
- Gold CREST**
- History Scholars**
- Extended Project Qualification (EPQ)**

- Maths Stretch

Oxbridge Programme

This is a programme aimed at preparing students for the application to Oxford or Cambridge University (Oxbridge). The cohort is selected based on GCSE grades, with an average grade of at least 8 required, and an induction essay.

In Year 12, students can expect:

- A weekly wider reading lesson
- A weekly lesson introducing the Oxbridge system
- Personal statement support
- Information regarding open days, masterclasses and summer schools at Oxford and Cambridge
- Information and support in applying for mentoring schemes
- Specific guidance for students of African and Caribbean heritage
- A Trust Oxbridge summer school

In Year 13, students can expect:

- Interview workshop
- A mock Oxbridge interview held by governors, directors and lead members of staff
- One-to-one support in writing and editing personal statements

Wider Reading:

To ensure the strongest possible Oxbridge applications, students will need to have read around their interests within their chosen field. Students will receive a monthly Wider Reading Newsletter, with 21 different subjects included. For each subject, there will be articles, books, podcasts, documentaries, free exhibitions and lectures in London.



UNIVERSITY OF
CAMBRIDGE



UNIVERSITY OF
OXFORD

WIDER READING

Twyford Wider Reading Newsletter: September/October



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Medicine/Dentistry/Biology p1
Chemistry/Physics p2
Maths/Engineering/Computing p3
Psychology/Sociology p4
Geography/Economics/Business p5
History p6
Politics/Law p7
Philosophy/Ethics/Religion p8
English/Film p9
Languages/Linguistics p10
Art/Graphics/Photography/Music p11

"If you only read the books that everyone else is reading, you can only think what everyone else is thinking"

—Haruki Murakami

Medicine/Dentistry

Audio/Video

- **Cancer, evolution and the science of life**
<https://www.youtube.com/watch?v=t0-Y3OHo7Ig>
- **The Evolution of Cancer Therapy by Professor Eleanor Stride**
<https://www.gresham.ac.uk/watch-now/cancer-therapy>
- **Trends in Health Implications for the NHS—Professor Chris Whitty**
<https://www.gresham.ac.uk/watch-now/health-trends>
- **Living Medicines—Christmas Lectures with Alison Woollard**
<https://www.youtube.com/watch?v=sJYvstAYqxc>
- **What medicine can learn from Savile Row**
<https://www.gresham.ac.uk/lectures-and-events/medicine-tailor>
- **How effective are face masks, really?**
<https://www.theguardian.com/science/audio/2021/sep/23/covid-19-how-effective-are-face-masks-really>
- **Our NHS: A Hidden History – BBC iPlayer**
<https://www.bbc.co.uk/iplayer/episode/m000xwz6/our-nhs-a-hidden-history>
- **Junior Doctors – BBC iPlayer**
<https://www.bbc.co.uk/iplayer/episodes/b013fbdj/junior-doctors>

Articles

- **Heading, concussion, and dementia: how medicine is changing football forever**
<https://www.bmj.com/content/374/bmj.n2343>
- **It is our governments' duty to protect health**
<https://www.bmj.com/content/374/bmj.n2334>
- **The bias that blinds: why some people get dangerously different medical care**
<https://www.theguardian.com/science/2021/sep/21/bias-that-blinds-medical-research-treatment-race-gender-dangerous-disparity>

Events

- **Should We Permit Voluntary Assisted Dying? Professor Imogen Gould**
Lecture, Barnard's Inn Hall, Monday, 24 Oct 2022 - 13:00
<https://www.gresham.ac.uk/whats-on/voluntary-dying>

MedSoc

What is MedSoc?

MedSoc is a program for aspiring doctors, dentists and veterinarians. The program runs for two years supporting like-minded individuals through the exciting and challenging journey to becoming a medical professional.

In Year 12, students can expect to attend:

- Support sessions designed to help students develop their medical portfolios ready for university applications
- Entrance exam preparation
- Personal statement support
- Journal article discussion sessions to expose students to academic writing
- Debates around NHS and wider medical 'hot topics'
- Advice sessions on securing volunteering/work experience positions

In Year 13, students can expect to attend:

- Entrance exam preparation
- Personal statement workshops and drop-ins
- Mock interview advice and preparation sessions
- Mock interview practice following the more commonly used MMI style of interview
- Mock group interview practise



EngSoc (Engineering Society)

What is EngSoc?

This society is for all students in the Sixth Form who are interested in degrees or careers related to engineering. As a highly competitive degree course, it is widely recognized that students need to demonstrate engagement with engineering beyond the curriculum. EngSoc will help students navigate this to ensure their applications are as strong as possible.

In Year 12, students can expect to attend:

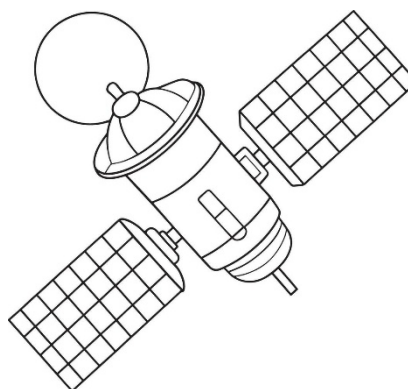
- Sessions introducing the different sectors in engineering: civil, mechanical, electrical, chemical, aerospace, software
- Guest speaker events and lectures
- Problem solving workshops relating to engineering
- Physics Olympiad preparation
- University admission test preparation
- Personal statement workshops

In Year 13, students can expect to attend:

- University admission test preparation
- Personal statement support
- Mock interview advice and preparation sessions
- Guest speaker events and lectures



ESAT
The Engineering and Science
Admissions Test



Gold CREST Award

What is the Award?

The **Gold CREST Award** is a nationally recognised STEM award for students aged 16+ who complete an independent science, engineering or technology project in small groups. It involves around **70 hours of work**, including planning, research, a practical investigation and an evaluation. Students produce a report and demonstrate their problem-solving and project-management skills. The award is highly valued by universities and employers because it shows initiative, resilience and independent learning.

The Award runs throughout Year 12 and follows the timeline:

Month	Activity
September	Introduction and sign up
October	Finalise groups. Confirm project title and aims after preliminary research
November - December	Complete literature review and references. Plan the investigation and order equipment / resources.
January - February	Practical work
March	Analysis and conclusion
April	Evaluation and first draft submission
May	Final draft submission



History Scholars

Members will be invited to partake in fortnightly debates during lunchtime. We will be addressing a variety of historical topics, and questioning a number of widely held historical beliefs and concepts. The debates will enable those of you who are genuinely interested in history to really explore the subject, and engage with others in lively discussion. This will also give you the opportunity to develop your confidence, practise speaking in public and 'thinking on your feet', all important developmental skills for future university and job interviews. There will also be the opportunity to go on a Day 'Humanities' Conference at SOAS, the University of London.

Applying to be a member of the Senior History Scholars does not commit you to being historians for the rest of your school and university careers. It is simply an opportunity for you to explore the subject further, and the skills and confidence that you will acquire through being part of the group will be beneficial to a number of different subjects and future opportunities.

Later on in the programme, however, we will spend time on Personal Statements and the interview process for those who wish to apply to read History or History related subjects at Oxbridge. We will also work on interview techniques and practice for anyone applying to read history or history related subjects at other universities.

'I would like to thank you for allowing me to take part in the senior history scholars debates. I really enjoyed attending the debates and hearing about topics I have never even thought twice about as well as also participating in my two debates which I enjoyed both researching the interesting topics as well as practicing and developing my debating skills while also improving my public speaking.'

'Thanks for the opportunity provided with History Scholars so far - the debates have been so interesting, and it's been fun a great learning curve writing the speeches for them!'

'I have thoroughly enjoyed being a member of the History Scholars society so far. So much in fact, that I would like to apply to do a history degree at university!'

Examples of previous debates:

Populism isn't always a negative force

Monuments to historical figures should remain

There's no need for a United Kingdom anymore

Black civil rights movements have had far more success in the US than the UK

Revolution always leads to progress

Extended Project Qualifications

These projects involve detailed research into any topic of the student's choice, allowing students the opportunity to go outside and beyond their A Level subjects. Students will do the vast majority of this research over Year 12 and will work one to one with a supervising member of staff to turn this research into a piece of extended writing.

The projects can take the form either of a 5000 word essay, or an artefact (such as a piece of art, a science experiment or a film etc) accompanied by a 1000 word essay.

This essentially equips students with the skills needed to bridge the gap between A Level and undergraduate style learning, as well as looking very impressive on personal statements.

It also supplies university interviewers with a topic to discuss with the applicants, which can demonstrate the breadth and depth of the students' knowledge and interest in their subject.

Examples of previous projects:

University Course	EPQ Title
History and Politics	Given the radical ideas present in the country at the time, why was the English Civil War outcome so conservative?
Animation	To what extent are animated features able to display complex emotions?
English Literature and Drama	Should censorship exist in the theatre?
Geography	What is the effectiveness of COP21 in aiding developing countries with the transition to greener climates without inhibiting economic development?
Aeronautical Engineering	To what extent have aeronautical advances been responsible for <u>globalisation</u> ?
Medicine	How effective are treatments of secondary cancers in primary sites?
Economics	An ongoing slump - The Japanese Economy 1990-2010
Maths and Computer Science	How effective is game theory at helping AI to win computer games?
English Literature	How has the Cinderella story of 'rags to riches' evolved?
Politics	Are we living in 1984?

Maths Stretch

The Maths Stretch programme is designed to support students preparing for rigorous university admissions tests in mathematics, in addition to their A-Level studies. These tests are essential differentiators for entry into top universities and include:

- **TMUA:** Test of Mathematics for University Admission
- **STEP:** Sixth Term Examination Paper

Students are taken through a demanding scheme of work and are required to complete additional problems outside lessons. Highly regarded by our highest achieving mathematicians, stretch lessons introduce students to undergraduate-style problem-solving, featuring questions that are less structured than those typically encountered in A-Level Mathematics and Further Mathematics exams. Students aiming for top universities to pursue a degree in mathematics or a related field are strongly encouraged to attend these weekly sessions.

The Year 12 Stretch programme formally begins after the Autumn half-term, covering key topics such as:

- Trigonometry and Geometry
- Differentiation and Integration
- Logarithms and Powers
- Algebra, Polynomials
- Primes and Proof, Recursion

In Year 13, students may be required to sit one or more admissions tests. To prepare, students work through past papers with the support of specialist maths teachers and participate in a mock exam to hone their examination technique.

Both Year 12 and Year 13 students in the Stretch programme also take part in the Senior Maths Challenge. A significant proportion of our students, well above the national average, achieve gold medals and progress to the follow-on Kangaroo and Olympiad challenges.

