



Twyford  
C of E  
High School

# Twyford Advanced Programme & MedSoc + EngSoc 2020-21

## TAP

### What is TAP?

TAP is a programme aimed at preparing students for the application to Oxford or Cambridge University (Oxbridge). The cohort is selected based on GCSE grades 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
- Beginning of the EPQ course (see overleaf)
- Information regarding open days, masterclasses and summer schools at Oxford and Cambridge
- The opportunity to attend partnership courses with private schools
- Information and support in applying for mentoring schemes
- Specific guidance for students of African and Caribbean heritage

In Year 13, students can expect:

- Interview workshop
- A mock Oxbridge interview held by governors, directors and lead members of staff
- Fortnightly EPQ lessons
- Completion of the EPQ
- EPQ presentation evening
- One-to-one support in writing and editing personal statements



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## **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 the summer holidays at the end of Year 12 and will work one to one in the autumn and spring term 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 globalisation?
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?

## 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.

September 2020

## WIDER READING



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Twyford Wider Reading Newsletter: September 2020 edition

### In this issue:

- Subject-specific articles
- Free enrichment events in London
- Documentaries and podcasts

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

—Haruki Murakami

### Maths and Engineering

#### Video/Audio

- Group Theory  
<https://www.youtube.com/watch?v=mH0oCDa74tE>
- Mathematics and Music  
Melvyn Bragg and guests discuss the mathematical structures that lie within the heart of music.  
<http://www.bbc.co.uk/programmes/p003c1b9>
- Chaos Theory  
Melvyn Bragg examines whether the world is a fundamentally chaotic or orderly place.  
<http://www.bbc.co.uk/programmes/p00548f6>
- The Maths of Future Computing  
This lecture examines the mathematics behind computing, starting with the history of the explosive growth of computer technology, from code breaking through to all aspects of modern communication and security, as well as the simulation of physical processes as used in the evolution of the universe to predicting the weather. It problems computers can solve, as well as the future possibilities.  
<https://www.gresham.ac.uk/lectures-and-events/maths-future-computing>

### Law

#### Articles

- Making war illegal changed the world. But it's becoming too easy to break the law.

*As the rules prohibiting the use of force are crumbling, we risk returning to a world where might is right and war is legal.*

<https://www.theguardian.com/news/2017/sep/14/making-war-illegal-changed-the-world-but-its-becoming-too-easy-to-break-the-law>

#### Video/Audio

- House of Lords: an audio collection  
Dr Richard Heffernan discusses the past, present and future of the House of Lords.  
<http://www.open.edu/openlearn/society-politics-law/politics/house-lords-audio-collection>
- The English Fix  
Patrick Wright meets the philosopher Sir Roger Scruton, who argues that the EU has encroached on the fundamentals of Englishness: the landscape, and the common law.  
<http://www.bbc.co.uk/programmes/b0939wgl>
- Why we may never know if British troops committed war crimes in Iraq  
<https://www.theguardian.com/news/audio/2018/jul/13/why-we-may-never-know-if-british-troops-committed-war-crimes-in-iraq-podcast>
- 'My death is not my own': the limits of legal euthanasia  
Henk Blanken knows Parkinson's disease might one day take him past the point at which he wants to carry on. Dutch law says it is legal for a doctor help die when the time comes—but there's no guarantee that will happen  
<https://www.theguardian.com/news/audio/2018/aug/17/my-death-is-not-my-own-the-limits-of-legal-euthanasia-podcast>

#### Events

- Brexit: Recovery of Sovereignty or Loss of Rights?  
Lecture by Sir Geoffrey Nice QC  
Tuesday 9th October, 6-7pm. Museum of London  
<https://www.gresham.ac.uk/lectures-and-events/brexit-sovereignty-or-loss-rights>
- State Torture  
Torture was officially outlawed in France in the 1780s and in Europe in the 19th century. In the late 20th and early 21st centuries, it has returned as an instrument of state policy. How have languages of patriotism, law and order, justice, the 'civilising mission', and human rights been used to foster attitudes towards and practices of torture in Western societies? What should our responses be?  
Thursday 18th October, 6-7pm. Barnard's Inn Hall. <https://www.gresham.ac.uk/lectures-and-events/state-torture>



## **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
- Problem based learning, similar to those used in some universities
- Debates around issues using bioethics

In Year 13, students can expect to attend:

- Entrance exam preparation
- Personal statement workshops
- Mock interview advice and preparation sessions
- Mock interview practise following the more commonly used MMI style of interview
- Mock group interview practise
- Debates around issues using bioethics

## External Speaker Program

There is an extensive program of external speakers, many of whom specialise in the medical field. Talks take place after school and students are strongly encouraged to attend these talks to widen their understanding of different medical disciplines. Examples of talks that have taken place in the past include:

MedSoc External Speaker  
Thursday 12<sup>th</sup> March  
3.30-4.30 A20



**NHS**  
Guy's and St Thomas'  
NHS Foundation Trust

**Dr Catherine Williamson – Professor of Women's Health at King's College London, consultant obstetric physician at St Thomas's Hospital**

Dr Williamson balances her time between her practice at St Thomas's hospital and conducting research with at King's College London. Please come along to hear her talking about her career in obstetrics as well as the current research she is undertaking.

**All students interested in dentistry or medicine welcome**

MedSoc External Speaker  
Thursday 26<sup>th</sup> September  
3:30-4:30 A20



**Cambridge  
MedSoc**



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**Abbeykeith Kugasenanchettiar - Cambridge Medicine Outreach**

Abbeykeith is in the second year of Medicine at Emmanuel College, Cambridge. Abbeykeith also serves as Secretary of Cambridge University Tamil Society and the Journey Officer for an educational start-up called Project Access, which pairs prospective university applicants with mentors studying the same subject to provide students with tailored support at every step of their application.

**All students interested in dentistry or medicine welcome**

MedSoc External Speaker  
Monday 25<sup>th</sup> November  
4:00 - 4:45 A20



University College **NHS**  
London Hospitals  
NHS Foundation Trust

**Professor Anton Emmanuel BSc, MD, FRCP**

Anton Emmanuel obtained his medical degree from London University. He is a Professor of Neuro-Gastroenterology at University College London and Consultant Gastroenterologist at University College Hospital at the National Hospital for Neurology and Neurosurgery (Queen Square). His current clinical work encompasses being director of the GI Physiology Unit at University College Hospital as well as providing specialist gastroenterology service for patients with neurological illness. His research includes gut neurophysiology and the study of the aetiology and management of functional gastrointestinal disorders of the upper and lower gut. He was appointed as editor in chief of *Clinical Medicine* and *Commentary* (the journals of the Royal College of Physicians), having served a similar role for eight years at *Frontline Gastroenterology*. He is deeply committed to developing the journals as a valued asset for members of the College. On a personal basis: father of four, immigrant of African-Asian origin, Londoner, failing guitarist, homebrewer.

**All students interested in dentistry or medicine welcome**



## MedSoc Wider Reading

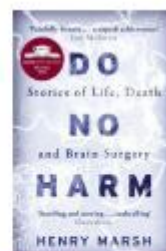
To ensure the strongest possible medical school applications, students will need to have read around their interests within the medical fields. The library has a number of specialist science books, including those specialising in the medical disciplines. In addition, there is a MedSoc Wider Reading List, developed based on recommendations from previous MedSoc students who have successfully secured a place at medical school. A section of the recommended reading list can be seen below.

### MedSoc Recommended Reading List



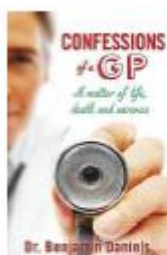
#### Complications by Atul Gawande

Sometimes in medicine the only way to know what is truly going on in a patient is to operate, to look inside with one's own eyes. This book is exploratory surgery on medicine itself, laying bare a science not in its idealized form but as it actually is -- complicated, perplexing, and profoundly human.



#### Do No Harm by Henry Marsh

Neurosurgery has met its Boswell in Henry Marsh. Painfully honest about the mistakes that can 'wreck' a brain, exquisitely attuned to the tense and transient bond between doctor and patient, and hilariously impatient of hospital management, Marsh draws us deep into medicine's most difficult art and lifts our spirits. It's a superb achievement.



#### Confessions of a GP by Benjamin Daniels

Confessions of a GP is a witty insight into the life of a family doctor. Funny and moving in equal measure it will change the way you look at your GP next time you pop in with the sniffles.



#### A Very Short Introduction to Medical Ethics

By Tony Hope

Issues in medical ethics are rarely out of the media and it is an area of ethics that has particular interest for the general public as well as the medical practitioner. This short and accessible introduction provides an invaluable tool with which to think about the ethical values that lie at the heart of medicine.

## **EngSoc**



### **What is EngSoc?**

EngSoc is a programme for aspiring engineers. The program runs for two years supporting students to learn about studying this popular subject at university along with the huge variety of careers it will open up.

Throughout their A-Levels students can expect:

- Directions to media relating to engineering news
- Information on the different types of engineering courses and what careers they prepare you for
- Support with pre-interview exam preparation
- Personal statement support
- Opportunities to take part in CREST for an engineering based project

### **External Speaker Program**

To present examples of the huge variety of careers engineering can offer, speakers working across many fields of engineering are invited to attend the school for short talks followed by Q & A sessions.

### **EngSoc Wider Reading**

In addition to the regularly updated media reading suggestions, a selection of books about different aspects of engineering are recommended for students so that they can find out about aspects of engineering in more detail.

Further information about extra-curricular events in the Science department can be found at

<https://twyford.ealing.sch.uk/specialisms/science>





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**Executive Headteacher**  
**Dame Alice Hudson**

**Associate Headteacher**  
**Miss Karen Barrie**

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**Twyford Church of England High School**

Twyford Crescent | Acton | London | W3 9PP | t: (020) 8752 0141 | f: (020) 8993 7627

e: [office@twyford.ealing.sch.uk](mailto:office@twyford.ealing.sch.uk) | w: [www.twyford.ealing.sch.uk](http://www.twyford.ealing.sch.uk)