

## Outreach Newsletter: March 2024

Welcome to the March edition of our Outreach newsletter!

Please do pass this on to anyone who may be interested in receiving this bulletin. They are very welcome to subscribe using this [link](#). If you wish to be removed, please email [outreach@chem.ox.ac.uk](mailto:outreach@chem.ox.ac.uk).

Thank you!

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## Contents

*Click to view*

### Upcoming Events:

Explore Chemistry (KS5)  
[UPDATE]

KS5 Chiral Chemistry  
Workshops [UPDATE]

### Future Events:

School / Community  
Workshops (KS2) [UPDATE]

Oxford College Workshops  
(KS4/5) [REPEAT]

### Other Opportunities:

Balliol Year 12 Chemistry  
Taster Day [REPEAT]

National Scientific Thinking  
Challenge (KS4) [REPEAT]

Unsung Heroes of Science  
(KS5) [NEW]

St John's Chemistry Inspire  
Study Day (KS5) [REPEAT]

Big Think Competition (KS4-5)  
[NEW]

Work experience [REPEAT]

RSC WiC [REPEAT]

### Learning Resource:

Like charges attract? [NEW]



## Upcoming Events:

### Explore Chemistry – A super-curricular series **[UPDATE]**

Our final Explore Chemistry event will be a special hour-long session for British Science Week on **Monday 11<sup>th</sup> March 17:15 – 18:15**. The session will feature a live talk from Oxford DPhil Samuel Madden (Flashman Group) entitled '*Coming up for Air: how plants sense and respond to changes in oxygen*'. The talk will discuss Sam's research into plant responses to low oxygen and hypoxia in oceans, along with insights into his journey to studying Chemistry at Oxford. A Q&A will follow the talk.

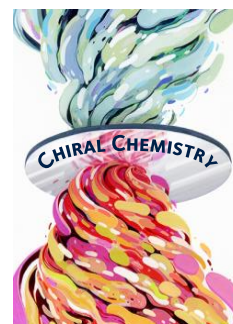


**SIGN UP TO THE SERIES**

The Explore Chemistry series is open to KS5 UK state school students and their teachers. If you're interested in attending, please ensure you have signed up to our mailing list by **12pm** on the day.

### KS5 Chiral Chemistry Workshops **[UPDATE]**

This is our online workshop for UK state school KS5 Chemistry students and teachers, which is delivered by our Department Ambassadors. Dates and times have been designed to avoid interruption of lessons. The session focuses on 3D shapes, chirality, the role of chirality in biological systems and the resources available to research chemists looking at proteins, such as the main protease in SARS-CoV-2, the latter being an active area of research in our Department. There is also an opportunity to ask our Ambassadors questions about their research and their academic careers to date. Students may attend without a teacher, provided we have a teacher contact.



The final workshop of the academic year will be delivered on **Wednesday 24<sup>th</sup> April 15.45–16.45**. Dates for the 2024–25 academic year will be announced in due course.

**REQUEST A SPACE**

Please note that for Chiral Chemistry and Explore Chemistry places are limited to students from state schools in the UK, Isle of Man and Channel Islands, and where we are oversubscribed, we will prioritise places for students who meet our widening participation and access criteria. Further information about this can be found at

<https://www.ox.ac.uk/about/increasing-access>

## Future Events:

### School / Community Workshops **[UPDATE]**

#### Online Primary Workshop: Plastic Fantastic?

This workshop is for a class of students in Years 5/6 (England and Wales), P5/6 (Scotland) and P6/7 (NI) in a UK primary school. Co-led with the class teacher, the students will interact with Oxford Chemistry ambassadors via MS Teams or Zoom, whilst undertaking small-scale investigations using materials which have been sent to the school in advance.

Our programme of workshops has concluded for this academic year. Dates for the 2024–25 academic year will be released in due course.

### Oxford College Workshops **[REPEAT]**

You are warmly invited to request a **College Workshop** when arranging a group visit with a College. Find out about your link colleges [here](#). *If you do not hear back from your link college within 14 days, do get in touch directly with us.*

#### Unlock the OxBox – Graffiti Game

A new puzzle box workshop for Year 9 (13–14 yrs), featuring a series of practical and theoretical problems. Minimum of 12 students, state schools please.



#### Unlock the OxBox – Poison Puzzle

This is for KS4 (14–16 yrs) and is a series of practical and theoretical chemistry problems. Minimum of 12 students, state schools please.

*"It is fantastic for the students to have this opportunity to apply their knowledge to a problem-solving activity and so enjoyable for them."* – Teacher

#### Unlock the OxBox – The Lab Lurker

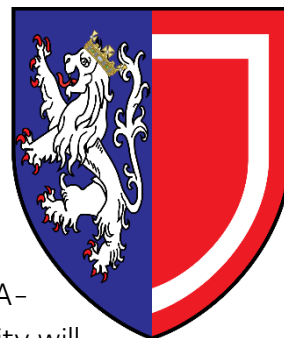
A series of practical and theoretical chemistry problems for KS5 (16–19 yrs) students. Would suit a class where at least half of the students are studying A level (or equivalent) in Chemistry. Minimum 12 students (at least six studying Chemistry A level, or equivalent), state schools please.

*You can mix and match Graffiti Game, Poison Puzzle and Lab Lurker puzzle boxes for groups including Year 9, KS4 and KS5 students, as long as there is a minimum of 12 students in total (a minimum of three from a Key Stage is required).*

## Other Opportunities:

### Balliol Year 12 Chemistry Taster Day **[REPEAT]**

Bookings are now open for Balliol College's Year 12 Chemistry Taster Day. This event includes academic sessions, an interactive workshop and a demonstration interview, as well as an opportunity to speak to tutors and current undergraduates.



The day is designed for students currently studying Chemistry and Maths at A-Level (or equivalent), and who are intending to study Chemistry at Oxford. Priority will be given to applications from disadvantaged students and from groups that are underrepresented at university level.

The deadline for applications is **Friday 15th March**, with successful applicants notified by Friday 22nd March. You can apply [here](#).

### National Scientific Thinking Challenge **[REPEAT]**

Entries are now open for the 2024 National Scientific Thinking Challenge, taking place on the last school week of April.

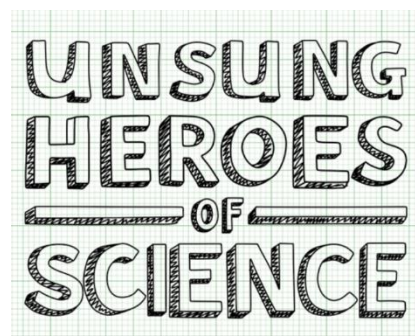


Devised for Year 10 students by academic staff from 6 major UK universities, this challenge comprises a series of questions on real-world applications of chemistry, and tests skills such as deduction, data analysis and problem solving. The challenges are marked and students who are within the top tiers nationally will be awarded gold, silver and bronze ranks (with printable certificates provided).

The challenge is open to all UK schools and is designed to take place in school science lessons. Further details, registration, sample questions and past papers can be found [here](#).

### Unsung Heroes of Science Video Competition **[NEW]**

Entries for the 2024 edition of the Unsung Heroes of Science video competition for 16–18-year-olds is now open. Entrants (as individuals or groups of up to 3) are invited to produce and submit a two-minute video on a scientific figure who they feel has been maligned or overlooked in history. Professional quality video editing isn't necessary – engaging content and ideas are the main criteria!



The shortlisted videos will be promoted by Hertford College and their creators will be invited to a summer prizegiving event at the college. The deadline for submissions is **Tuesday 16<sup>th</sup> April**. You can find more information on the competition [here](#), as well as [past winning videos](#) and [resources for teachers](#).

### St Johns Chemistry Inspire Study Day **[REPEAT]**

Applications are now open for the St John's Inspire Chemistry Study Day on Thursday 6<sup>th</sup> June 2024. The day will feature talks and workshops led by Chemistry tutors, along with the information about the Oxford course, admissions tips and the opportunity to meet current St John's students.

The Study Days are open to high-achieving Year 12 students at non-selective state schools. Participants must be predicted to achieve at least AAA at A-level (or equivalent). Lunch is provided but students must make their own travel arrangements to and from Oxford.

The application for can be found [here](#). The deadline for applications is **midday on Wednesday 8<sup>th</sup> May 2024**.

### St Edmund Hall Big Think Competition **[NEW]**

Entries for St Edmund Hall's annual Big Think Competition are now open for UK state school students in Years 11-13. This competition invites entrants to consider 'big' questions from their respective subjects and requires entrants to produce a five-minute video presenting their arguments, research, evidence and opinions on the question. Ideas are more important than professional editing skills, so entrants can film on their phone if they would like. Entries also do not need to include their face in the video.

This year's Chemistry question is: *Last year's Nobel Prize in Chemistry was awarded for the discovery and synthesis of quantum dots. Why?*

The 1<sup>st</sup> prize is £100 with winners also being invited to Oxford for the day for a college tour, lunch and to discuss their video with subject tutors. The deadline for entries is **Wednesday 1<sup>st</sup> May**. Further information and details on how to submit can be found [here](#).



## Work experience [REPEAT]

It is with regret that we are unable to offer work experience placements in the 2023-24 academic year. We do understand that many students are keen to undertake work experience having had these opportunities severely curtailed in the pandemic. We are hopeful to be able to offer placements in the future, which will be advertised via our website. Please do not send us unsolicited requests for work experience opportunities in the meantime, thank you.

## RSC Women in Chemistry [REPEAT]

In-between our scheduled RSC Women in Chemistry events, a reminder that there are lots of exciting opportunities to participate in practical work, including Science Clubs. Do keep an eye on our [website](#) and [Twitter](#) for further information on future events and activities!

## Learning Resource: Like charges attract? [NEW]

A recent study by an Oxford Chemistry group led by Professor of Physical Chemistry, Madhavi Krishna, (and published in *Nature Nanotechnology*) found that similarly charged particles can sometimes attract (rather than repel) at long range when suspended in certain solvents, depending on charge. This work has implications for processes involving interactions in solutions across various lengthscales including self-assembly, crystallisation, and phase separation. You can find further information and a link to the paper [here](#).

