



Teacher of Chemistry, January 2020

We seek an enthusiastic and inspiring chemist with a good degree who will relish the challenge of teaching very bright students in this outstanding department in one of the nation's top Grammar Schools.

Chemistry is one of the most popular choices for A Level students, with currently 8 sets in Year 12 and 7 sets in Year 13; all of these students will be expected to progress on to Russell Group Universities with an above average number (up to 30) of successful Medical applicants each year.

Within a vibrant and exciting Science Faculty, you will be part of a close knit, friendly team of seven well-qualified and experienced chemists. Efficient organisation and good interpersonal skills, together with an eagerness to encourage and nurture students to achieve their very best performance will be important.

St. Olave's Grammar School places great emphasis on the concept of scholarship, inspiring young people to enjoy the fascination of this subject and to pursue individual research into areas of interest. We enjoy stretching our students with challenges, such as the Chemistry Olympiad, Cambridge Chemistry Challenge and run a weekly Chemistry Society encouraging students to develop their presentation, discussion and problem-solving skills.

All colleagues at St. Olave's are expected to play as full a part as possible in the wider life of the school community.

The Chemistry Department

The Chemistry Department currently comprises three full time chemists and four part-time members and is supported by an experienced team of technicians.

We have followed the OCR A specification at A-Level for several years. We have followed the Edexcel 9-1 Chemistry course at GCSE for the last three years. At both key stages we place a strong emphasis on the development of practical skills and problem-solving.

The excellent results contribute to the popularity of the sciences post-16. Over the last three years over 90% of grades were at A*/A (or level 7-9 in 2018) in GCSE Chemistry and at A*- B for A Level Chemistry.

Class sizes are around 26 at GCSE and are nominally capped at 18 for A level classes.

Four laboratories are designated specifically for Chemistry; two others also have fume cupboards and are used significantly for chemistry lessons.

A significant number of candidates apply to Oxbridge and Russell Group universities to read a variety of subjects, including Medicine, Natural Sciences, Chemistry, Biochemistry and Engineering.

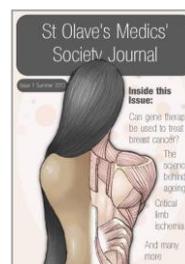
The Science Faculty

The Science Faculty is housed in a purpose-built block, comprising twelve spacious and very well equipped laboratories, two of which were added in 2015, and two large preparation rooms. Every laboratory has a whiteboard and a digital projector.

The Science Faculty is dynamic and forward-thinking, and our success is driven by the enthusiasm of staff and students alike. Within the Faculty each discipline is encouraged to flourish and make its own identifiable contribution, but communication and teamwork across departments is also a strong element of our identity. To this end, Science is taught by one teacher per form in Years 7 and 8 as a combined course following a modified KS3 programme of study. In Years 9 to 11, the three sciences are taught separately by subject-specialists, leading to three GCSEs in Biology, Chemistry and Physics. All three science departments are currently implementing the new GCSE specifications.

Enrichment activities within the Faculty include three thriving Sixth Form societies: Medics' Society; Natural Sciences Society and Engineering Society, all of whom regularly publish outstanding journals. These embody the spirit of scholarship, championed at St. Olave's, with some fascinating research articles such as:

- Saturn's moons: the cool, the big and the shiny
- Autoclave sterilisation
- Is RuBISCO the most important enzyme?
- Solar energy: polymer-based solar cells
- Beta Thalassaemia
- Epigenetics – the truth about DNA
- Are replacement bio-teeth a realistic possibility?
- Critical limb Ischemia
- The tree man – Epidermodysplasia Verruciformis
- The problems caused by Cane Toads in Australia
- Carbon nanotube fibres and brain communication
- Trastuzumab – a treatment for breast cancer



In the lower school, scholarship and investigative skills are encouraged through a Junior Natural Sciences Society, a Crest Club, Astronomy Club, and the ever-popular Chemistry Club.

The Olavian Lecture Series, initiated by student leaders of the Natural Sciences Society has seen some inspirational speakers over the last three years, including:

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| • Professor Julian Ma | Emerging Technologies for Emerging Infectious Diseases |
| • Professor Mehdi Vahdati | Current and Future Aero Engines |
| • Dr Robert Mulvaney OBE | Frozen in Time |
| • Professor Andrew Flewitt | Large Area Electronics, Enabling the Internet of Things |
| • Professor Sanjeev Gupta | Exploring Mars with Robots – the Curiosity and ExoMars Rovers |
| • Dr Harry Cliff | What Next for the Large Hadron Collider? |

The Science Faculty comprises nineteen full and part-time teaching staff, plus four technicians. All are expected to be able to teach across the sciences in Years 7 and 8 and some offer two subjects to GCSE. All members of the Faculty are encouraged to play a full role in its development (e.g. writing and revising schemes of work) – which indeed they do – although the responsibility for matters such as these rests ultimately with the Heads of Department.

Andrew Rees
Headteacher

Neil Stewart
Head of Science Faculty