



## INTRODUCTION TO THE CHEMISTRY DEPARTMENT

### Teaching

Chemistry is a popular subject at A-level, the third-largest in the school. We currently have near 200 sixth form Chemistry students, in 8 classes. Students have 10 hours of lessons per fortnight in Year 12 & 13, split between two teachers. We follow the AQA A-level specification. We are lucky to work with many talented and motivated students; students are exposed to the possibility of further study into Chemistry through evening lectures, and other exciting extra-curricular activities. Each summer we have around half a dozen students leaving us to study Chemistry at university, along with a similar number studying Chemical Engineering and a host of students in Biochemistry, Pharmacology and Pharmacy.

Pupils are currently taught Chemistry, Biology and Physics separately from Year 7, by subject-specialist teachers. Small class sizes (no more than 26 students) allow more individualised learning to take place. Pupils have two 1-hour Chemistry lessons per fortnight in Year 7, two in Year 8 and three in Year 9. We have a strong emphasis on practical skill, reaction equation familiarity and recognition of formulae in Key Stage 3, with the fundamentals of bonding being taught at the beginning of Year 9. Important concepts and skills including enthalpy changes and balancing equations are taught in Key Stage 3, enabling students to be continually challenged throughout their Chemistry lessons.

At GCSE, students either take separate Chemistry, Biology and Physics GCSEs, or GCSE Combined Science: Trilogy, all following AQA specifications. All pupils have four hours of Chemistry teaching in Years 10 and 11. Teachers who join the school at this exciting stage will have the opportunity for a considerable amount of GCSE and A-level teaching.

### Facilities and equipment

All Chemistry lessons are taught in well designed and resourced laboratories. Of particular attraction is the Chemistry Superlab: a double-sized laboratory ideally suited to large practicals and outreach events. Every laboratory has an interactive whiteboard with visualiser and graphics tablet.

We have an incredible array of top-quality, brand-new equipment, thanks to a very generous startup budget, and a generous annual budget. Equipment suggestions are welcomed from teachers as we continue to refine a hands-on curriculum for all year groups. We encourage pupils to work individually in practicals, and have the resources to do this. We also have a range of up-to-date textbooks and online resources and have chosen a wide variety of Chemistry-related books for the library.

### Teacher CPD, Support and Progression

The Chemistry department has close links to the West Midlands Chemistry Teachers' Centre, attending teacher training workshops and lectures. In addition, the department has benefitted from working closely with the University of Birmingham's School of Chemistry and School of Education, and the RSC's Secondary and Further Education Group. In school, there is a research-led CPD programme for all teaching staff co-ordinated by the Assistant Vice Principal for Teacher Development, and a comprehensive programme to

support Early Career Teachers. A number of members of staff are completing their Masters while at the school.

### **Enrichment**

Pupils and students enthusiastically engage with our enrichment programme, which has so far included:

- **For the sixth form**, an exploration of practicals outside of the main curriculum, the Royal Society of Chemistry's Olympiad, Cambridge Chemistry Challenge, lectures from University academics, and Oxbridge preparation.
- **For the lower school**, STEM club, and British Science Association CREST Awards.

Many of these activities are timetabled into the school day and rotate through the year to provide interest for students and staff alike. Many teachers choose to lead enrichment activities in range of sports, creative pursuits and other hobbies.

### **The Team**

The Chemistry department is an enthusiastic and committed team of four full-time, talented and well-qualified teachers, pro-actively supported by a member of our Senior Leadership team who is a Chemistry specialist and teaches some of our A-level students. We work extremely well together, and enjoy passing on our passion for the subject to the students we teach. Six full-time experienced and enthusiastic technicians support the whole school; with one technician dedicated to chemistry at all times. We work closely with colleagues across other subjects, particularly the other sciences and Mathematics.

You are welcome to contact Jess Howard, the Subject Leader for Chemistry, at [j.howard@uobschool.org.uk](mailto:j.howard@uobschool.org.uk) with any queries regarding the department.