**King Edward VI Handsworth Grammar School**

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**Post: Chemistry/Biology Teacher**

**Salary: Main/UPS Scale**

**Closing date: 19th April 2024**

**Interview date: w/c 22nd April 2024**



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Science Faculty

**The Science Faculty’s aims are to:**

* stimulate interest in, and enjoyment of, Science
* develop skills, knowledge and understanding of Science and, through support and challenge, enable each student to realise their full potential
* deliver effectively the National Curriculum and the requirements of Post-16 Specifications
* encourage the students to become informed and aware members of society, able to formulate and communicate their own opinions and judgements about developments in Science
* develop students' knowledge and understanding of health and safety issues

The Science Faculty is housed within a purpose built two-floor block consisting of eight laboratories, four preparation rooms and resource/office accommodation. There is an additional laboratory in a neighbouring building and, owing to the popular nature of the subject, some lessons inevitably have to be taught in classrooms or computer suites.

The Science Faculty consists currently of eleven full-time teachers, two part-time teachers and another teacher who also delivers Geography. Teaching staff are supported by two Science technicians.

# **KS3 course**

The Key Stage 3 course follows the **KS3 National Curriculum guidelines** and uses the **Activate Oxford Programme** as its basis. It is taught during **Years 7, 8 and 9** with Biology, Chemistry and Physics being taught under the umbrella of ‘**Science’** in Years 7 and 8 only; students are taught in tutor groups. This is taught over 8 periods per fortnight. The rationale here is to aid their integration into secondary school following their progression from KS2 to KS3, which is a big jump for many given the low-profile Science receives, in some schools, at KS2.

In Year 9, students are split into ability bands and are taught ‘separate’ **Biology**, **Chemistry** and **Physics** by subject specialists. Each subject is taught for 4 periods per fortnight in **Year 9** so giving a total of 12 periods of ‘**Science’** (going to 5 periods per fortnight in Years 10 & 11). This curriculum design enables us to integrate teaching certain GCSE topics **at KS3** and continue the curriculum progression into full GCSE at **KS4** in **Years 10** & **11**. This is done by developing topics (first taught at KS3) further by way of building on the detail of, and making visible, the connections between the various topics, which encourages students to see the big picture through the cross-curricular connections.

Students will be placed in one of five sets based upon their Year 7 and 8 test and examination performances, with sets 1-3 being parallel sets (top band) made up of the top 60% of the year group and sets 4 and 5 are parallel sets (lower band) made up from the remaining students.  **All students will cover the same material in Year 9.**

# **KS4 courses**

The teaching of GCSE topics dovetails into Science lessons at KS3, particularly during Year 9. Students have 5 periods per fortnight in each Science subject (so 15 periods in total) in **Years 10** and **11**.

In Year 10, students are placed in broad ability bands, with (‘parallel’) Sets 1-3 being comprised of students who performed particularly well in their Year 9 Science examinations. Sets 4 and 5 are also two ‘parallel’ sets and Set 6 is a smaller set made up of students whose examination performances suggest that they would benefit from a higher level of individualised support. **All students will follow the same programme in Year 10, however**. The programme then followed by students in Year 11 will depend upon their performances in the end-of-Year 10 examinations and their mock examinations (taken in December of Year 11):

**Separate Science route**

Those students who perform well in the assessments will continue to follow a programme leading to the award of **GCSE Biology, Chemistry and Physics**. They will sit two 1 hour 45 minute papers in each Science subject, each paper being worth 100 marks and consisting of multiple choice, structured, closed short answer and open-response questions. We expect that most students will follow this programme.

**Combined Science route**

Some students’ performances may indicate that it will be in their interests for them to be prepared for entry into **GCSE Combined Science: Trilogy** instead of the separate Sciences. This is a double award qualification; it is worth two GCSEs. Students will sit two 1 hour 15 minute papers in each Science subject, each paper being worth 70 marks and consisting of multiple choice, structured, closed short answer and open-response questions. As there is less content to be covered, there will be more time to consolidate and revise material during lessons. It should be noted that this route also allows students to embark upon the study of A levels in Biology, Chemistry and Physics.

The courses are based upon the **AQA Specifications**, and final assessments will be by means of a series of terminal question papers (at the end of Year 11) which contain a variety of question styles.  As part of the course, students will perform or observe a number of ‘**required practicals**’ (in addition to usual practical work); some examination questions will be related to these.  There is no coursework component in any Science GCSEs.

KS5 courses

Science subjects are popular choices at A level. Currently, there are three sets of Physics students in both Year 12 and Year 13, and four sets in each year group studying Biology and Chemistry. Students sit their external examinations at the end of Year 13. The courses are based on the AQA Specifications and these, together with past papers and mark schemes, are available on the AQA website [www.aqa.org.uk](http://www.aqa.org.uk).

You can read more about our KS3, KS4 and KS5 curriculum on our website at: <https://www.handsworth.bham.sch.uk/curriculum/subjects/science/>

**Wider aspects of the Science Faculty**

The Science Faculty provides a wealth of enrichment activities; students are encouraged to take a wide interest in all aspects of Science and not just the topics covered in the laboratory.

Science quizzes and competitions are entered by all age groups and we have been particularly pleased in the past with our pupils' performances in, for example, the University of Birmingham ‘Big Quizzes’ (for Year 9 Physics and Year 10 Biology), Physics and Chemistry Olympiad Competitions and the Physics Challenge Competition.

Sixth Form students are encouraged to attend lectures at Birmingham University organised by the West Midlands’ Chemistry and Physics Teachers' Centres and there are regular visits to other university departments for special events.

There have been recent visits to CERN, The National Space Centre in Leicester and Thinktank at Millennium Point together with visits run jointly with the History Department to Berlin, Munich and Paris. A KS3 Science Club has provided some exciting opportunities for students such as participation in the CREST Award scheme. There is a residential Field Trip for A level Biology students each year.

Many of our students go on to use the scientific knowledge and skills they have gained and developed at KEVI HGS directly and indirectly at university and in subsequent careers as engineers, scientists, doctors, dentists, pharmacists etc.

#### The vacancy

The vacancy arises as a result of more hours of Science being taught at GCSE level, and one more colleague shifting to part-time. The vacancy represents an exciting opportunity for a graduate of Science (Biology and/or Chemistry or a related discipline) to establish themselves in a reflective and forward-looking Faculty within a selective school.

Candidates should be able to teach **Chemistry to GCSE and A level**; the **ability to teach Biology to GCSE level would be an advantage**. The successful applicant will also be required to **teach Science at KS3.**

**King Edward VI Handsworth Grammar School**

King Edward VI Handsworth Grammar School (HGS) was opened in 1862 with 59 boys and has faithfully served the locality ever since. Even then, the boys came from far and wide to receive their education here and that has not changed – even though we also now have girls in the Sixth Form. HGS joined the King Edward VI Foundation and King Edward VI Academy Trust (Birmingham) in 2017. While about 40% of the students come from the locality, the remainder come to the School from distances in excess of twenty miles. Our intake, being the top 40% of the ability range, is broader than any other selective School. Community links are maintained and developed by many of our students helping with various projects, including the Youth Parliament and Primary Outreach projects. Involvement in the community has been a great strength of the School. In our Ofsted inspections of 2017 and 2022 HGS was graded as Outstanding in all areas.

One of the things that makes HGS so exciting is the rich diversity of its student body. The School is proud to educate students from a wide range of ethnic, religious and cultural traditions, this education being in a spirit of harmony and mutual understanding. This helps to make HGS an ideal place for its students, helping to prepare them for the multicultural world in which we live. We try to celebrate our diversity from within our community. This has been repeatedly acknowledged by Ofsted, with high praise being given to our contribution to community cohesion, partnership work and SMSC (Ofsted 2009, 2013, 2017 and 2022).

The 1862 building, where it all began, is still in use today, but now there is a great deal more besides. Improved facilities of which the School can boast include a new Sports Hall (2007), an ICT Resource Centre (2007): major refurbishment of the main Music Teaching Room (2008): the conversion of an old Gym and a new build to create a Learning Hub, which includes a new Library, Sixth Form Study Rooms (2010) and a Reprographics Room: new Art Rooms and new Law and Psychology Room (2010), which has enabled a room to become a specific academic PE teaching room elsewhere in the School.

More recently a new Food Technology Room has been built and completed in August 2011. Just under two miles away are our extensive playing fields, which include changing room facilities. Major work has been undertaken with the refurbishment of the Pavilion (2015) and construction of an Astro Turf pitch (2015) and a full size 3G pitch (2017). A new £1.6 million Sixth Form Centre was completed in 2015. This is an exciting development providing a personalised Sixth Form study area. In addition, we have an annual programme of work which sees us updating and improving the campus, for example the School Reception was recently refurbished, an Astro Turf pitch built on the main school site (2015) and our Design Technology department was completely refurbished with state-of-the-art equipment (2017).

 In addition, the School is very active in the local community and works closely with several primary partners, as well as the Academy Trust, work that has been highly valued over the years. We have developed a rich Outreach programme which includes Reading and Sports volunteers, Masterclasses and 11+ Familiarisation. As with all schools, there is much to be done on the inside, but we like to compliment that and keep our perspective by looking outside as well.

Over the years the School has helped its students to achieve excellent exam results at GSCE and A level. Each year, the vast majority of Sixth Form students move on to higher education taking a wide range of courses at local, regional, national and international universities. We also increasingly have students who have secured apprenticeships with global companies such as Deloitte and Rolls Royce. We pride ourselves on the quality of our careers and higher education advice, through which we try to help our students gain places on the right course and in the right location.

# The Area

Birmingham is the country’s second largest city, with facilities that are beaten only by London. It can boast world-class music, drama and dance, which adds to a rich tapestry of nightlife. Other attractions range from Shakespeare at Stratford to the beauties of the Malvern Hills. Being at the centre of a very large transport network, there is easy access to most parts of the country. Handsworth itself is North West of the City Centre and could once rival the ‘city of a thousand trades’ for the scope of its industry.