

Science at King Egbert School

We are a department of 16 highly qualified teaching staff and three very experienced science technicians. We offer a variety of science courses that are suited to the diverse needs of our students.

We are committed to providing a broad and academically rigorous curriculum that offers many routes to higher education and ultimately a job in a STEM subject. We believe strongly that science education and careers should not be limited to those of high attainment but should be an option for all. We are proud to be one of the only schools in Sheffield who allows any student to study separate sciences at GCSE, and year upon year we have over 50% of the Y9 cohort opting into this route.

Inspiration

Through access to engaging lessons, enrichment and STEM activities, we aim to inspire students to study science further. We:

- Enter external science competitions such as the National Analyst competition and the Alan Turing competition.
- Will run a weekly science club for enjoyment and inspiration.
- Enter the Biology, Chemistry and Physics Olympiad and the Cambridge Chemistry Challenge.
- Will work with agencies such as the IOP and encourage applications to the Cambridge University women in STEM week to encourage a greater uptake of girls into STEM subjects.
- Work with the Institute of Engineering and Technology and the Smallpeice trust to offer engaging experiences such as the Faraday Challenge.

- Have strong links with our local universities and offer trips such as the physics trip to Manchester University and attendance to lectures at Sheffield Hallam University.
- Are working with Oxford University on the Making Materials Matter challenge.
- Will take students on field trips such as the Y12 trip to CERN in Switzerland and the A level biology field trip to the North Yorkshire Coast.
- Are involved in the house afternoons and run the Y7 forensics challenge.
- Run internal competitions such as science photography.
- Celebrate science weeks by running activities including a live rat dissection and periodic table quizzes.
- Support students with applying for the Arkwright Scholarship.
- Have links with The Engineering Development Trust where students have attended week long engineering courses.
- Will encourage students to apply for courses such as the STEM challenge at Imperial College London.

Key Stage 3

The KS3 Science curriculum is taught throughout Years 7, 8 and 9. In Year 7 all students are taught in mixed ability groups. All students follow the same schemes of learning in which science skills and knowledge are concurrently developed.

After Christmas in Year 9 students will study bridging modules that consolidate their learning at KS3 and prepare them for the demands of KS4 in more depth.

Key Stage 4

During the option process in Y9 students make a choice whether to follow the combined science courses in Year 10 and Year 11 or choose the three separate Science GCSE courses (Biology, Chemistry and Physics). All students have a free choice of whether to study separate sciences or the combined course.

Year 10 and Year 11

Current Year 10 and Year 11 students are now either following the Edexcel Combined Science GCSEs or the Edexcel Separate Science GCSEs (Biology, Chemistry and Physics). Details about these courses can be found at the following link:

<http://qualifications.pearson.com/en/qualifications/edexcel-gcses/sciences-2016.html>

All our Schemes of Learning for KS3 and KS4 in Biology, Chemistry and Physics can be found in the 'Teaching Sequence for Individual Subjects' link to the right of this page.

Key Stage 5

Year 12 and Year 13 students are either following A level Science courses or the level three BTEC course.

Biology

<http://www.ocr.org.uk/qualifications/as-a-level-gce-biology-a-h020-h420-from-2015/>

Chemistry

<http://www.aqa.org.uk/subjects/science/as-and-a-level/chemistry-7404-7405>

Physics

<http://www.ocr.org.uk/qualifications/as-a-level-gce-physics-a-h156-h556-from-2015/>

Edexcel Level Three BTEC

Students have the option to study either:

10 lessons a week to gain the Level 3 Diploma in Applied Science (previously 'subsidiary diploma') which has the equivalence of 1 A level at the end of Year 12 and a Diploma, which is equivalent to the second A level, at the end of Year 13 (this allows students to study another subject as well).

15 lessons a week to gain the Diploma in Applied Science (previously 'subsidiary diploma') which has the equivalence of 1 A level at the end of Year 12 and the Extended Diploma which has the equivalence of two more A levels at the end of Year 13.

<http://qualifications.pearson.com/en/qualifications/btec-nationals/applied-science-2010.html>