

Birchwood High School

Science Faculty



Our aim

- To deliver the highest quality Science teaching to every student.
- To thoroughly equip our students for today's technological world.
- To enable our students to be fully aware of the implications and application of Science, so that they can make judgements on environmental and social issues.
- To enthuse our students with a lifelong interest in scientific matters and to have fun learning.
- To ensure our students fulfil their potential in examinations.

These aims are to be achieved by offering investigations where the students have to think for themselves, diverse questioning techniques and through the delivery of well-planned, high quality Science lessons.

Science is a heavy user of IT and all teaching staff are given a lap top to facilitate this. We use dedicated Science i-pads and data logging equipment to engage student understanding and debate. A Science resources area facilitates the sharing of ideas and effective materials across the faculty and our students have benefited from the innovative ways in which we have adapted our schemes of work in order to make full use of these valuable resources.

Within Science many resources are held electronically including Schemes of Work.

As a Science teacher, you will be responsible for:

- National Curriculum teaching in all Sciences at KS3 and KS4.
- Teaching KS5 in your specialist area.

- Record keeping and monitoring of student progress through target setting.
- Contributing to the development of schemes of work.
- Assessment and regular marking of students' work.
- Examination preparation, marking and writing of reports.
- General display material.
- KS3/KS4/KS5 required practical administration.
- Initial responsibility for classroom discipline.
- Laboratory safety.
- Attendance at Faculty and parents' meetings.
- Reviewing and monitoring of curriculum changes.

Accommodation

The Science faculty is undergoing a refurbishment programme and all nine laboratories have interactive whiteboards and network points.

The Curriculum

Key Stage 3 students receive six hours of Science per fortnight structured around a bespoke two-year scheme of work. One piece of home learning is set each two-week period.

Triple scientists receive ten hours per fortnight (over three years) with three teachers (Biology, Chemistry and Physics).

Additional scientists receive ten hours of Science per fortnight (over three years) with two teachers.



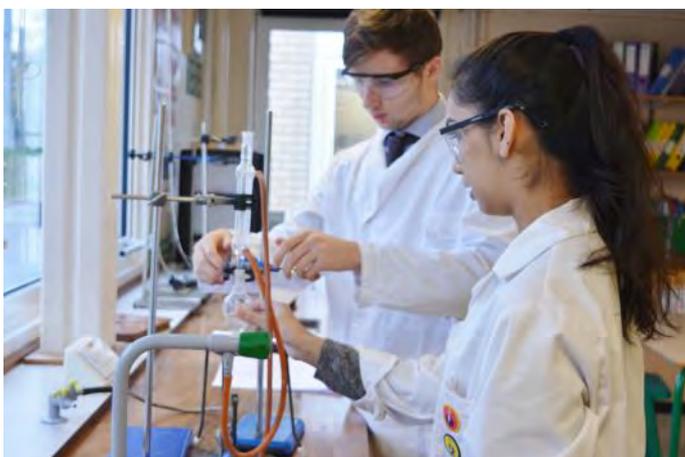
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Schemes of Work

The Science Faculty is in the process of updating and reviewing the KS3 curriculum and cohorts complete KS3 in two years. We have adopted the "Activate" scheme of work in Years 7 and 8 which equips students with the skills needed for their KS4 journey as well as making Science fun.

For KS4 we offer AQA triple award Science, Science 'A', Trilogy and Additional Science. The schemes have been written in house and are reviewed for content, context and practical activities on a regular bases. All exams are taken at the end of year 11.



A Level Teaching

There is considerable interest in the Sciences at 'A' Level and we offer Biology, Chemistry and Physics. We have excellent and growing numbers again next year and it is likely that the newly appointed member of staff may have the opportunity to teach 'A' Level in their specialist subject.

From September 2017 we will be introducing the Level 3 BTEC Certificate and Extended Certificate in Applied Science.

Student Setting

All students across KS3 and 4 are banded into academic sets which are constantly reviewed and refined. At Birchwood we value all our students and aim for value added results for all our Science learners.

Sixth form students are also openly encouraged to be leaders of learning. In this capacity we have students helping and leading learning in KS3 and KS4 classes; supporting students and teachers alike.

Our Philosophy

We believe that our students should enjoy Science, find it rewarding and gain knowledge and understanding by investigating things for themselves.

Science is a large faculty consisting of 12 teachers and five support staff. All Science teachers and Technician staff are of equal importance and it is fully recognised that effective learning requires such team coordination.

Extra-Curricular

Science club takes place at a lunchtime and is successfully enthusing students and engaging them in STEM type activities.

We run trips to Colchester Zoo for Year 8 and have also visited CERN in Switzerland, The Greenwich Royal Observatory, Big Bang Fair and Cambridge Astronomy Club.

Sixth former students have the opportunity to spend a day at GlaxoSmithKline and Merck, Sharp and Dohme, guest speakers are invited to the Faculty to support our learning and teaching.

We regularly send a group of 'A' Level Chemistry students to the Chemistry Lectures at the University of London and CERN.

Sixth Form Biology field trips are run every year and our students have the opportunity to conduct field sampling and ecology based investigations.

We are always looking to expand our repertoire of trips and external speakers to keep Science live, relevant and interesting.

Revision and mentoring sessions are run for Years 9, 10, 11, 12 and 13 after school in order to support the GCSE modules and final examinations.

We help with local primary schools within our catchment area with their KS2 Science work by a combination of visits either to their school or by sessions at Birchwood as part of our Primary Liaison programme.

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