

Physics Department

Physics is a successful and popular subject at Judd, with strong results both at GCSE and A-level. The department is staffed by four qualified, specialist Physics teachers and is supported by a dedicated Physics technician. There are four Physics laboratories (two recently refurbished), each with a digital projector, AV and computer and a plethora of apparatus (ancient and modern) for demonstrations and practicals – the department even has two Tesla coils.

Both teachers and students are encouraged to extend teaching and learning beyond the standard syllabus at all Key Stages, with emphasis on exploring and highlighting the context and relevance of topics and ideas, practical application and hands-on experience and future developments of theory. The use of ICT as a complementary resource for demonstrations is strongly supported, with resources being available online for all sections of the teaching, including animations, interactive shows, video clips and quizzes. The department is also currently developing its use of the school VLE.

KS3: A 2-year course based on practical and scientific skills and the wider physics syllabus is followed. The aim of this first stage primarily is to introduce the students to scientific enquiry, establish some basic scientific principles and, above all, foster an interest in physics. Current topics include space exploration, energy concerns and topical issues. An annual trip to Herstmonceaux Observatory takes place in year 7.

KS4: A 3-year GCSE course (AQA) is implemented. A regular series of practical lessons is expected, to give the students a hands-on approach to the various concepts emerging in lessons.

KS5: A-level Physics is a popular choice, with around 160 students studying the AQA Physics A syllabus. Practicals are conducted weekly in lessons for every class, with work going towards a practical skills qualification. Written exams comprise a Year 12 end of year/UCAS internal exam and A-level external exams which are taken in May/June in Year 13. Sets are shared between two teachers with the syllabus being divided accordingly. Teaching A-level Physics at Judd can be a challenging task; there are a lot of them (we're one of the biggest physics departments in the UK) and the students can be very enquiring, with many reading around the subject themselves, often discussing issues with their teachers. Independent study at KS5 includes a web-based set of weekly assignments which can include some very difficult questions (degree level) which the teachers are expected to assist with. The school usually enters a number of Y13 students into the BPhO, one of whom previously reached the international final in Mexico.

Current Vacancy

The successful candidate will need to have a genuine and demonstrable interest in science in general and physics and its associated subject areas. An ambition to pursue excellence in teaching through continued development of lessons and resources is essential, as is an ability to enthuse and inspire pupils, particularly through some of the more difficult concepts of the subject. The department expects its staff to deliver high quality teaching, assessment and monitoring of progress and to be able to stretch and support pupil learning at all levels of ability and at all Key Stages. In addition, contributions to resources, teaching ideas and lesson plans, trips and enrichment are always encouraged, and the successful candidate will be fully involved in moving the department forward.