



Physics Curriculum Information - A Level

As students embark on their Physics A Level, we thought it would be useful to share an overview of the course.

In Key Stage 5 Physics:

The OCR A level Physics specification can be found [here](#). This ensures a solid foundation of Physics covering all the classical concepts with good basic introductory modules for the more modern areas of Quantum and Particle Physics. The popular Astrophysics and Cosmology topics supply the awe and wonder factor and there is a Medical Physics topic which draws together many concepts into an interesting applied section towards the end of the course.

Each class has 2 teachers who cover separate areas of the course. We start Year 12 with a Foundations of Physics module running parallel with Electricity. Each topic has a booklet, used to guide students through the course, highlight key information and for question practice. We encourage students to produce their own detailed notes in their own style, this allows them to develop independence and initiative. Question practice is strongly encouraged as this quickly develops the ability to apply new concepts to problems, in addition to increasing confidence in mathematical and analytical skills.

Students will sit 3 exams at the end of the course: Modelling, Exploring and Unified. The practical aspect of the course is taught and assessed via PAGs (practical assessment groups). There are 12 of these that cover a range of topics and skills increasing in complexity from Year 12 to Year 13. Every student must take part in these and ensure that each skill is checked off by the end of the course. The skills learnt are then assessed in the final exams, particularly the final paper.

Each year, we organise a trip for our Year 13 physicists to the world renowned CERN, just outside Geneva. This gives the most wonderful opportunity to see how physicists, engineers and computer scientists work together towards a common goal making groundbreaking discoveries along with inventions born from a need, such as the World Wide Web.

Homework and feedback:

Homework and independent study, up to five hours per week, is expected in order to consolidate knowledge, understanding and skills. It may take the form of a written or practical piece and may be teacher, self or peer marked. Feedback is given in line with the school marking policy and exam board assessment criteria.

Revision and assessment:

Revision may be: taught revision sessions, resourced individual study or completely independent work. Students have access to textbooks, revision guides and topic booklets, as well as the whole host of online resources recommended on the Google Site and in lessons. Each student is encouraged to try multiple revision methods to find the way they learn best. Through regular assessment, students secure learning and skills needed for the A Level Physics examinations. It is important to stress that exam style questions are essential as part of any revision process.

Co-curricular Physics:

- We currently run a weekly clinic for all students to attend if they have queries or need help.
- There is also the AHS Physics society, run by our enthusiastic ambassadors which provides an opportunity for like minded students to discuss and learn more about this intriguing subject.
- The regular after school STEM talks are often supplemented with visits from our own alumnae home from university or working in related fields.
- We encourage students to take part in competitions such as the British Physics Olympiad challenges and have also run trips to conferences such as 'Physics in Action.'

More information can be found on the [Physics content page](#) of the school's website.

If you have any queries, please contact Mrs Jane Brittain, Head of Physics, at jbrittain@ahs.bucks.sch.uk