

Curriculum Intent

Students develop:

- essential knowledge and understanding of different areas of the subject and how they relate to each other.
 - and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods.
 - competence and confidence in a variety of practical, mathematical and problem solving skills.
 - their interest in and enthusiasm for the subject, including developing an interest in further study and careers associated with the subject.
- Understand how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society (as exemplified in 'How Science Works').

Practical work undertaken to support teaching of the content will serve to cover the requirements of the practical skills module (Module 1), which is assessed in the written examinations and through the Practical Endorsement.

What do students *do* with this knowledge or these skills?

They will be able to carry out their own practical investigations independently as part of the PAG portion of the course as well as link in the ideas covered in their theory lessons to their analysis and evaluation of experimental results.

They will participate in group discussion and tasks outside of class in the support of their peers with mixed year group support sessions.

They will be able to apply their theoretical and practical knowledge to summary tasks in revision sessions. This includes creating an evolving mind map summary of the course, testing their peers' knowledge and completing exam questions in timed conditions.

Overall their knowledge and practical skills gained will be demonstrated with frequent end of topic tests, feedback tasks and extended research tasks.

How does the KS5 curriculum build on that from KS4?

A level Physics gives the opportunity to explore the phenomena of the universe and to look at theories that explain what is observed. This subject combines practical skills with theoretical ideas to develop descriptions of the physical universe. You will learn about everything from kinematics to cosmology and many recent developments in fascinating topics, such as particle physics. If you are interested in the limits of space, the beginning of time and everything in between this is the subject for you. Physics is more than a subject – it trains your brain to think beyond boundaries.

What new knowledge or skills are students taught?

Term	Year 12	Year 13
Autumn	3 Forces and motion incorporating foundation of physics <ul style="list-style-type: none"> • 2.1 Physical quantities and units • 2.2 Making measurements and analysing • 2.3 Nature of quantities 	5 Newtonian world and astrophysics <ul style="list-style-type: none"> • 5.1 Thermal physics • 5.2 Circular motion • 5.3 Oscillations • 5.4 Gravitational fields • 5.5 Astrophysics and cosmology
Spring	<ul style="list-style-type: none"> • 3.1 Motion • 3.2 Forces in action • 3.3 Work, energy and power • 3.4 Materials • 3.5 Newton's laws of motion and momentum 	6 Particles and medical physics <ul style="list-style-type: none"> • 6.1 Capacitors • 6.2 Electric fields • 6.3 Electromagnetism • 6.4 Nuclear and particle physics • 6.5 Medical imaging
Summer	4 Electrons, waves and photons <ul style="list-style-type: none"> • 4.1 Charge and current • 4.2 Energy, power and resistance • 4.3 Electrical circuits • 4.4 Waves • 4.5 Quantum physics 	<ul style="list-style-type: none"> • Revision & GCE Examinations
Rationale for this sequencing	OCR A provides a flexible approach to teaching. The specification is divided into topics, each covering different key concepts of Chemistry. Teaching of practical skills is integrated with the theoretical topics and they are assessed through the written papers. For A level only, the Practical Endorsement will also support the development of practical skills.	

Additional support at home

Additional reading for enjoyment, enhancement and extension	<ul style="list-style-type: none"> • In search of Schrodingers Cat by John Gribbin • The Elegant Universe by Brian Greene • The Book of Why by Judea Pearl
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Online resources to practice, consolidate and revise	<ul style="list-style-type: none">• Physics and Maths Tutor• Cognito Resources (Topic Questions & Past Papers)• Save My Exams
Workbooks & revision guides to practice, consolidate and revise	<ul style="list-style-type: none">• CGP Revision Guide & Workbook