

Physics in the Sixth Form

Course content (Edexcel 2015 syllabus)

- See <https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/physics-2015.html> to view the Specification in detail

Staff who could be teaching

- Mrs Mighall (Curriculum Lead Physics)
- Dr Fletcher
- Mr Broadbent

How/where to find support

- You will be issued with a text book (physical and an online version) at the start of the course in September and we can advise you on other suitable books you may wish to purchase then
- You will sit a baseline test in the first week based on the summer preparation work so we can direct anyone to a support session to fill in any gaps from GCSE to help you make as smooth and rapid progress as possible
- You will find your teachers will add useful web links and uploads on the A-level Physics FROG page as the course progresses
- Physics at A-level, like all A-levels is challenging. If you are stuck on a weekly homework you should arrange to see a teacher before the homework is due in (it is therefore important that homework is started well before the deadline so you have time to seek advice if needed)

Teachers' top tips for success on the course

- Your teachers believe you make more rapid progress in Physics when you work collaboratively. We will give you various seating plans throughout the year so you have the opportunity to meet new people and share different ideas on how to solve problems
- Physics at A-level is much more mathematical and problem solving based than GCSE, so working collaboratively outside lessons is also very helpful when working through homework tasks (we assess what you can do on your own via regular tests)
- Homework should total an hour and a half per Physics teacher per week (3 hours in total)
- If your teacher has set questions due in, complete them on separate paper to your notes
- If homework has taken less than the suggested time then you should complete active reading (use text book to supplement your notes with added

notes, diagrams, references to page numbers, annotations to your active book online)

- Corrections to any returned homework is ALWAYS part of your homework – you will not specifically be reminded to do this – it is an expectation!

Equipment you will need every lesson

- Text book, calculator, protractor, 30cm ruler and set square in addition to normal stationery which includes your own lined paper
- You will need to keep all your notes and work sheets in a ring binder file. File dividers are advised to separate your topics as you will be simultaneously studying 2 different topics; one with each teacher

Summer holiday tasks

The work below is the starting point for A-level studies in the Autumn term and your baseline test at the start of the course will cover these topics.

It would be advisable to review your mechanics and electric circuits work from GCSE.

Topics include:

- Forces
- Speed
- Acceleration
- Scalars and vectors
- Distance-time graphs
- Velocity time graphs
- Work, Power and Potential and Kinetic Energy
- Terminal Velocity
- Circuit symbols
- Rules for Series and Parallel Circuits
- Ohms Law
- V-I graphs for resistors, bulbs and diodes
- Behaviour of Thermistors and LDR's

You should make a set of review notes reminding yourself of the main concepts and equations as well as definitions. It would be advisable to practise some advanced GCSE questions towards the end of the summer holidays to refresh your mind. You should also be confident at re-arranging formulae in these topics. Your review notes should be put in a folder and brought to your Physics lessons for the first term so you can review your GCSE quickly and readily in lessons as these topics will be developed to the higher level throughout the autumn term.