

# PHYSICS AS/A LEVEL: SUPPORT SHEET FOR STUDENTS AND PARENTS

## Lessons, Homework and Assessment

Each Physics group is taught by 2 teachers. The 4.5 hours a week are divided into 3 elements: 1.5 hours of theory with teacher A, 1.5 hours of theory with teacher B and a 1.5 hour practical session with teacher A (the major teacher). In addition to timetabled lesson time, there is also the expectation that students will spend at least an additional 4.5 hours consolidating their learning, which will include, but is not limited to set homework.

Set homework will cover both theory and practical work. The following are the main types of work we will set:

- Theory homework will be set on a regular basis by both teachers and will be recorded on a homework posting forum on Godalming Online. A typical theory exercise will often consist of (mostly mathematical) problems set around the current topic. As Physics is a demanding subject, we would expect students to need to spend longer on these exercises than may be first apparent. They may need to do further background reading or research to complete the work and should persevere to produce as complete solutions as possible, to ensure that valid learning takes place. We have listed below a range of resources that students can use to this purpose.
- Practical reports should be completed after every practical session. There is a tight turn around for this, as reports need to be marked and returned within a week before the next practical session. Each group will be informed of the deadline for submitting their laboratory notebooks. Practical work is viewed as a very important aspect of the course, both to develop practical skills and to reinforce the learning of theory concepts. In addition, practical work needs to be marked to assess the separate practical endorsement award, which exists alongside the full A level qualification.
- Benchmark tests are set every half term and students will always be given plenty of notice before each test and an indication of the topic areas to be covered. The expectation is that they will spend a significant time on revision and preparation. With Linear A levels, benchmarks are the main evidence we have for predicting performance in the final exams and so need to be taken very seriously.

### ACTUAL EXAM AT THE END OF TWO YEARS

At the end of the 2 years of study, you will be taking three two hour exams. In addition, you will also be assessed for the practical endorsement. This is a separate pass/fail grade and does not contribute to the overall A level grade, however questions about practical techniques do feature in the theory exams. The format of the papers is as follows:

#### **PAPER 1: First year topics and circular motion / oscillations**

- Structured short answer questions worth a total of 60 marks.
- 25 multiple choice questions worth 1 mark each.

#### **PAPER 2: Second year topics**

- Same format as paper 1. This paper will also include some synoptic elements - Physics is a subject where the second year content builds on the first, so you can expect to need to apply an understanding of the first year content.

#### **PAPER 3: Practical Skills & Option Topics**

- 45 marks on practical skills and data analysis.
- 35 marks on your chosen option topic.

## Students: Where can students get help for themselves?

Teachers are there for guidance with your studies but we may be different from your school in that we would expect you to have accessed support materials and tried to work out any misunderstandings yourself before seeking out extra help. This is particularly the case with theory problems where perseverance towards obtaining a solution is a much more valuable learning experience than simply giving up and waiting to be shown how to do it! The onus is on you to take responsibility for your learning. We would also strongly recommend that you start work as early as possible, so that if you identify problems there is time to seek extra help before the final deadline. The following can help you with that:

1. **TEXTBOOKS:** Consolidation of content is important – particularly as the time to deliver theory in lessons is quite limited, and the pace of A level can be quite fast. Students are encouraged to buy or borrow a textbook, and the ILC/Library has copies of all main Physics textbooks - There are several textbooks endorsed by AQA for the linear Physics A level. The Hodder books are the main texts used and these are available to read online as a free eBook service – there is a link to this through Godalming Online.

2. **FURTHER PRACTICE QUESTIONS:** At some stage during each year we will issue booklets of past questions, compiled for previous AQA examinations. Although primarily intended for revision, these may also be useful to support learning earlier in the course. An electronic copy of the booklets and the corresponding mark schemes can be found on the revision tab on the Godalming Online page for the appropriate year.
3. **GODALMING ONLINE AND OTHER WEBSITES:** The revision tabs on each Godalming Online site also include links to revision websites that students have found useful in the past. In particular, we recommend [www.antonine-education.co.uk/](http://www.antonine-education.co.uk/) which, although written initially for the modular specification, relates particularly well to the AQA course.
4. **OTHER STUDENTS:** Although we would never advocate simply copying work from another student, we are aware that in some cases a collaborative approach and bouncing around ideas can help to work through a difficult problem. Outside of college time, a variety of social media platforms and other online resources may be used for students to discuss their work.
5. **DROP IN SUPPORT:** Every Monday & Wednesday lunchtime in the Physics lab (131), students can drop in to for extra help on a 1:1 or small group basis. Later in the year, these sessions may focus more on specific revision topics, but general drop in support will remain available. The department also operates an 'open-door' policy for quick questions – if we can answer your query in a few minutes, then we will normally try to help.
6. **MATHS FOR PHYSICS:** In the first year, students who do not study Maths A level have a 45 minute additional 'Maths for Physics' (MPK) lesson timetabled. We will also enrol students onto this course who take Maths if we feel they would benefit from the additional support. Should you find during the year that you are struggling with the mathematical elements of Physics, then it may be possible, subject to timetable constraints, to opt into this course.

### Parents: How can you help?

We often get asked by parents of students studying for the AS and A level examinations what things they can be doing to help them achieve the best possible grade. Whilst almost all the work that is required to be successful at A level must come from the student there are some things that parents can do that can help :-

1. Above all encouragement. Physics is a notoriously difficult subject at A level. In particular, there is a big step-up from GCSE, and every year students totally underestimate how much harder they need to work to stay afloat at this level.
2. As already mentioned, encourage them to start all set work as soon as possible, so they can seek help if necessary. Starting a task the night before the deadline is not a good strategy!
3. Learning cannot happen just in the classroom. They have to be responsible for that learning as well. It is something we drill into them from the beginning of their studies. 50% of their learning is expected to happen in the classroom but 50% is also expected OUTSIDE the classroom.
4. Encourage them to attend the drop in workshops run by the Department on Monday and Wednesday lunchtimes for extra help with topics they are finding difficult.
5. At the end of every half term they will be given a benchmark assessment– ask how they performed in the test and encourage them to spend time revising and consolidating content ahead of it.

### What happens if a student is underperforming?

At Godalming College, there is an ethos of 'dealing with the student first'. We will work with you to achieve your studies as best we can and parents are only contacted at the review times of January, June in the first year and November and March of the second year. However some students struggle with Physics and find they are unable to learn effectively for whatever reason. If your teachers are significantly worried about your progress, the department will place you onto a 'Departmental Action Plan' (DAP) as sanctioned by the Head of Department outside of these review periods. This is where we formalise contact with your parents through a bespoke action plan so that you, the department and your parents can all help you to achieve your potential. These action plans are a supportive mechanism to get you back on track. A failure to meet the action plan will mean that you are referred to your Senior Tutor for further support. Where a student is culpable for their underperformance, the Senior Tutor may decide to place you onto a Formal Warning under the College's disciplinary procedures. Where a student is struggling for health or other extenuating circumstances, the Senior Tutor may place you onto a 'Supportive Warning' to further support your studies.

At the end of the first year an annual review grade (ARG) will be determined based on your performance in benchmarks and your work throughout the year. Students who achieve an ARG grade of E often struggle with the harder second year work, and so will be placed on an Action Plan at this stage (if not already on one). Part of the support provided will be a timetabled commitment to attend the Monday lunchtime workshop session.

