Physics A Level

"Headstart to Physics" the CGP book is a good place to start as it covers the progression from GCSE to A Level. There are helpful questions at the end of each page to check your understanding. The book costs £5 on Amazon.

If you're not so confident on your maths skills, then CGP also produce a similar priced guide on "A Level Physics: essential maths skills". Although it covers the maths you will encounter on the whole 2 year course, you should just concentrate on re-arranging formulae, simple trigonometry and doing calculations with numbers in standard form and avoid some of the more complicated topics at this stage. As one of the most important skills is re-arranging formulae there is a document covering this, together with examples for you to practice, below:

http://engineering.armstrong.edu/cameron/rearranging%20formulae%20worksheet.pdf

If you simply want to brush up on some of your GCSE knowledge, then have a look at some of the following sites:

- https://revisionworld.com/gcse-revision/physics
- https://www.bbc.co.uk/bitesize/examspecs/zsc9rdm
- https://studywise.co.uk/gcse-revision/

The topics we will be starting with on the A level course from September to Christmas are currently planned to be:

- Materials (*density, Hooke's Law on extending a spring, and how other materials extend*)
- Quantum Phenomena (*the photoelectric effect, what is light, when atoms can emit light*)
- Mechanics (*forces, velocity and acceleration, kinetic and gravitational potential energy*)

We follow the AQA A Level Physics specification, and you can look at the short video explanation clips on these topics at following website

- https://www.alevelphysicsonline.com/aqa

For those students interested in a career in engineering, there is a free course provided by the University of York that takes you through the key skills and knowledge needed for engineering. It can be found by following the link below:

- https://www.futurelearn.com/courses/creating-the-amazing-engineering-the-future

To broaden your awareness of how Physics influences our lives, then browse through the list of TED talks at the link below. These are typically given by engaging experts in their field and cover topics from "How quantum physics can make encryption stronger?", to "Have we reached the end of Physics?"

- https://www.ted.com/talks?topics%5B%5D=physics&sort=relevance&q=physics

If you have any questions, then please feel free to email me, Dr Newton, at mn@hereford.ac.uk. Please note that over the summer holidays it may take a week or two to reply.