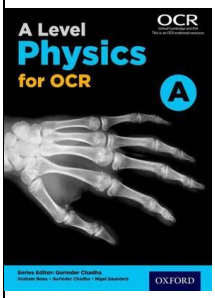
Tolworth Girls' School & 6th Form	YEAR 12 TRANSITION PROGRAMME - INDEPENDENT STUDY TASK SUBJECT NAME : Physics	
Activity	**Main study Independent Study Task Activity Guidance Notes**	**Suggested supporting visits or readings.**
Task 1	A-level physics involves lots of problem solving and maths skills. Complete the problems set out in the power-point for Physics. Please show all your workings out.	The textbook may help you if you buy it over the Summer:  **OCR AS/A level Physics A** *Publisher: Oxford University Press* *ISBN: 9780198352181*
Task 2	You may also want to spend some of your time over the Summer holidays having a read of one of these Physics and Physics related books. These books are not textbooks full of equation work and practice questions, rather they provide an insight into either the application of Physics or deals with an area of study that you will be encountering at A-Level for the first time. 1. **Surely You're Joking Mr Feynman: Adventures of a Curious Character** Richard Feynman ISBN - 009917331X. 2. **Moondust: In Search of the Men Who Fell to Earth** Andrew Smith ISBN – 1408802384 3. **Quantum Theory Cannot Hurt You: Understanding the Mind-Blowing Building Blocks of the Universe** Marcus Chown ISBN - 057131502X	Hopefully you'll get the opportunity to soak up some of the Sun's rays over the summer – synthesising some important Vitamin-D – but if you do get a few rainy days where you're stuck indoors here are some ideas for films to watch or clips to find online. Science Fictions Films 1. Moon (2009) 2. Gravity (2013) 3. Interstellar (2014) 4. The Imitation Game (2015) 5. The Prestige (2006) Or try a series such as wonders of the universe by Brian Cox. Online Clips / Series Minute Physics – Variety of Physics questions explained simply (in felt tip) in a couple of minutes. Addictive viewing that will have you watching clip after clip – a particular favourite of mine is "Why is the Sky Dark at Night?" https://www.youtube.com/user/minutephysics

Why not try a podcast:

- ❖ While the world may be changing, podcasts have not. Why not try immersing yourself in the world of physics with some of the following podcasts.

The titanium physicist

The infinite monkey cage

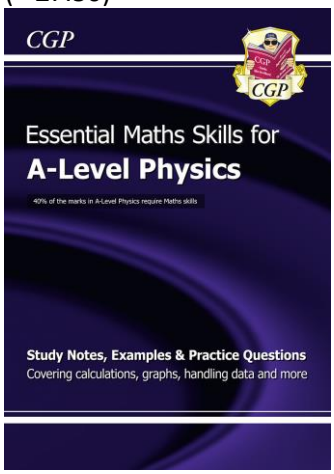
Crowd science

What the if

Physics world

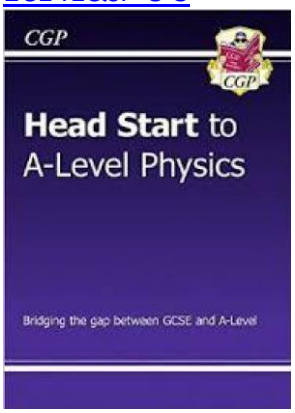
New A-Level Physics: Essential Maths Skills

Publisher: CGP
ISBN-10: 978 1 78294 471 3
This brilliant CGP book covers all the maths skills needed in AS and A-Level Physics (the use of maths is required for up to 40% of the marks in the final exams and assessments). It explains Calculations, Geometry, Trigonometry, Graph Skills and Handling Date, with clear study notes and step-by-step examples in the context of Physics. And to make sure you've really got to grips with it all, there are practice questions for each topic - with answers included at the back of the book.
(~ £7.50)



Head Start to A-Level Physics

Publisher: CGP
ISBN: 978 1 78294 281 8
This fantastic Head Start book from CGP is the ideal way to bridge the gap between GCSE and A-Level Physics. It recaps all the crucial topics you'll need to remember from GCSE, with crystal-clear study notes and examples, plus practice questions to test your understanding. It also includes introductions to some of the key topics you'll meet at A-Level! (~ £4.95) or free to download with the App
https://www.amazon.co.uk/Head-Start-Level-Physics-CGP-ebook/dp/B095YZY7J6/ref=sr_1_3?crid=1YWG9PWQAJORX&dchild=1&keywords=head+start+to+physics+a+level&qid=1626104899&spr

		efix=head+start+to+phys%2Caps%2C141&sr=8-3 

Please complete the set tasks and submit to your subject teacher on the first lesson in September. If you are unable to print the completed work, please email it your Physics teachers:
Mr Ongoren enes.ongoren@tolworthgirlsschool.co.uk

1. The specification for OCR Physics A – this explains exactly what you need to learn for your exams https://www.ocr.org.uk/Images/171726-specification-accredited-a-level-gce-physics-a-h556.pdf
2. Practice exam papers https://www.ocr.org.uk/qualifications/as-and-a-level/physics-a-h156-h556-from-2015/assessment/
3. Practical handbooks explain the practical work you need to know https://www.ocr.org.uk/Images/295483-practical-skills-handbook.pdf
4. Maths skills support https://www.ocr.org.uk/Images/295471-mathematical-skills-handbook.pdf
5. The internet has many other resources to support study.:
    - The Institute of Physics - http://www.iop.org/#gref
    - Physics and Maths Tutor (revision notes and past papers) https://www.physicsandmathstutor.com/physics-revision/a-level-ocr-a/
    - A Level Physics Online https://www.alevelphysicsonline.com/ocr-spec-a
    - YouTube - has thousands of Physics videos. Physics Online, Dr Physics A, Cowen Physics and Snap Revise (although this required a subscription) are amongst the best for Physics A-level.
6. Textbooks - our approved textbooks are published Pearson.
7. Revision guides - these are great if you want a quick overview of the course when you're revising for your exams. Remember to use other tools as well, as these aren't detailed enough on their own.
8. Magazines – Physics World, New Scientist or Philip Allan updates can help you put the physics you're learning in context. Also great for discussion when you start your University Interviews!