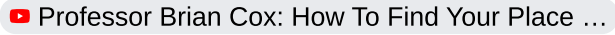


Year 12 Transition

Welcome to The Island VI Form

KS5 Subject:	Physics A Level
Objectives for Transition Tasks:	
<ul style="list-style-type: none">• Review some essential maths and science skills before starting the course.• Further develop an interest in Physics and how lots of key concepts have been developed as well as how they still are being developed and improved.	
Watch:	Independent Task (to be submitted):
<p>'Atom' – by Jim Al-Khalili. The history of our relationship with the atom and atomic energy. All 3 episodes are linked below</p> <p>E1 – 'Clash of the Titans' https://www.youtube.com/watch?v=GOJFznzSZhM</p> <p>E2 – 'Key to the Cosmos' https://www.youtube.com/watch?v=CYQwrAht7HA</p> <p>E3 – 'The Illusion of Reality' https://www.youtube.com/watch?v=KFS4oiVDeBl</p> <p>'Secrets of Size: Atoms to Supergalaxies' - https://www.bbc.co.uk/iplayer/episode/m0017frm/secrets-of-size-atoms-to-supergalaxies-series-1-1-going-small</p> <p>'Neutrino – Hunting the Ghost Particle' - https://www.bbc.co.uk/iplayer/episode/m000zwqr/neutrino-hunting-the-ghost-particle</p> <p>How to find your place in the universe - by Brian Cox </p> <p>Wonders of the universe - by Brian Cox https://www.youtube.com/playlist?list=PLDE65D78966FEC465</p> <p>The story of Time - by Jim Al-Khalilli https://www.youtube.com/watch?v=rC6Pa8cuBfl</p> <p>How long is a piece of string - BBC Horizon How long is a piece of string</p> <p>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</p>	<ul style="list-style-type: none">• <u>Work through the tasks</u> in the booklet. Each section covers important core mathematical and scientific skills that will be essential from the beginning of the course.• Ensure you have a working Scientific calculator.• Get a ring binder and / or a workbook to keep your Physics notes & work in.

favourite of mine is “Why is the Sky Dark at Night?”
<https://www.youtube.com/user/minutephysics>

Shock and Awe, The Story of Electricity – A 3 part BBC documentary that is essential viewing if you want to see how our lives have been transformed by the ideas of a few great scientists a little over 100 years ago. The link below takes you to a stream of all three parts joined together but it is best watched in hourly instalments. Don't forget to boo when you see Edison. (alternatively watch any Horizon documentary – loads of choice on Netflix and the I-Player)
<https://www.youtube.com/watch?v=Gtp51eZkwol>

NASA TV – Online coverage of launches, missions, testing and the ISS. Plenty of clips and links to explore to find out more about applications of Physics in Space technology.
<http://www.nasa.gov/multimedia/nasatv/>

The Fantastic Mr. Feynman – I recommended the book earlier, I also cannot recommend this 1 hour documentary highly enough. See the life's work of the “great explainer”, a fantastic mind that created mischief in all areas of modern Physics.
<https://www.youtube.com/watch?v=LyqleIXTpw>

Link to the website for the **AQA Physics Page** with the specification & details of what is in the course as well as how it is assessed.
<https://www.aqa.org.uk/subjects/science/as-and-a-level/physics-7407-7408>

Read:

Book recommendations:

- Six Easy Pieces – Richard Feynman
- Why does $E=mc^2$ – Brian Cox and Jeff Forshaw
- [A-Level Physics: Essential Maths Skills from CGP books](#) - a useful study guide for the maths content in A level Physics if you are not studying A level Maths. There are usually lots of cheap second hand copies for sale online as well.
- [Head Start to A-Level Physics from CGP books](#) - a useful resource if you know you need to review your GCSE Physics knowledge before starting A level.

Other:

The infinite monkey cage -
<https://www.bbc.co.uk/programmes/b00snr0w>

Staff Contact

Mr Palmer
Email: peter.palmer@theislandviform.org.uk

science/comedy panel show on Radio 4 which invites leading experts to discuss the major ideas of their field in a fun and accessible way.

The Feynman lectures - by Richard Feynman
<https://www.feynmanlectures.caltech.edu/>

Aim Higher Task:

Choose **one** of the following Physics topics;

1. Standard model of particle Physics
2. Quantum mechanics
3. Gravitational waves
4. Special Relativity

Do a little bit of research & reading. Then design a poster that explain the big ideas you have found out about to a non-scientist.

DEADLINE FOR TRANSITION TASK: Please bring to your first lesson in September.