

HELSEBY

Sixth Form



Year 11 Sixth Form Transition Material

AQA A Level PHYSICS

Congratulations on choosing to study A-Level Physics!

The information and tasks contained in this booklet will help you to research and prepare for your course when you start at Sixth Form Helsby in September. They will provide you with an overview of what to expect from your A Level studies and help you to develop a greater understanding of the subject.

This is by no means an exhaustive list but it will help you to start thinking about the subject and extra-curricular study and research.

Podcasts/Video Clips:

- Introduction to A-level Physics:
https://www.youtube.com/watch?v=hYN_W8WfbGs
- Infinite Monkey Cage Podcasts
- Wonders of the Universe / Wonders of the Solar System
- Minute Physics
<https://www.youtube.com/user/minutephysics>

Trips/Activities:

- Visit the Manchester Science & Industry Museum
- Participate in the British Physics Olympiad – Experimental Project
- Visit Alton Towers to study ride mechanics!
- Visit Jodrell Bank

Reading:

Below is a selection of books that should appeal to a physicist – someone with an enquiring mind who wants to understand the universe around us. None of the selections are textbooks full of equation work (there will be plenty of time for that!) instead each provides insight to either an application of physics or a new area of study that you will be meeting at A Level for the first time.

- Surely You're Joking Mr Feynman: Adventures of a Curious Character
- Moondust: In Search of the Men Who Fell to Earth
- Quantum Theory Cannot Hurt You: Understanding the Mind-Blowing Building Blocks of the Universe
- A Short History of Nearly Everything
- Thing Explainer: Complicated Stuff in Simple Words
- New Scientist (<https://www.newscientist.com>)

Films/Documentaries/TV:

Science Fictions Films

- Moon (2009)
- Gravity (2013)
- Interstellar (2014)
- The Imitation Game (2015)
- The Prestige (2006)

Where can A Level Physics take you?

Studying physics enables you to look at hidden laws that explain why all matter and energy in the known universe exists, where it comes from and how it behaves the way it does.

Physics will help you to build up your problem solving, research, and analytical skills. With these skills you'll be able to test out new ideas plus question and investigate other people's theories, which is useful for any kind of job that involves research or debate.

Physics will support your study of other science and tech subjects, including chemistry, biology, engineering, geography and computer science.

Physics is especially closely linked to maths, so studying the two together can improve your skills in both. It is also regarded as a 'facilitating subject'.

With physics you can go into many careers including lots of non-physics careers such as management or finance. However, relevant careers include anything to do with building or developing new technology including architecture, engineering, astronomy, space exploration, games development and modelling the climate!

Explore your options further:

- <https://www.informedchoices.ac.uk>
- <https://www.iop.org/careers-physics/your-future-with-physics/career-paths>
- <https://www.iop.org/careers-physics/your-future-with-physics/apprentice>
- <https://www.prospects.ac.uk/careers-advice/what-can-i-do-with-my-degree/physics>

Transition Work:

- Completing the PiXL club – Transition to A Level Physics Workbook
- Complete the Isaac Physics – GCSE to A Level transition questions
https://isaacphysics.org/gameboards?stage=gcse#gcse_alevel_transition_skills