

Year 11 into 12 – Physics Summer work

July 2023

Introduction:

Curiosity about physics is essential for A Level students as it unveils the fundamental laws governing the universe, from the smallest particles to the largest galaxies. This curiosity drives innovation, sharpens analytical and problem-solving skills, and provides a deep understanding of natural phenomena. By exploring physics, students can pursue diverse careers in engineering, technology, and research, and gain the tools to tackle real-world challenges. Embracing physics nurtures a lifelong fascination with the workings of the cosmos and the principles that shape our reality.

This article links to a Y12 Physics trip that Students will be offered in November. It looks at Space exploration.

Unveiling Martian Secrets – Tales from the Curiosity and Perseverance rovers

Sanjeev Gupta, Imperial College London



Embark on a captivating journey to the Red Planet as we delve into the fascinating realm of Martian exploration. Discover how we direct our robotic pioneers to navigate the Martian terrain, scouring the surface for long-lost environments that may have once nurtured the formation of life. *(Image credit: NASA/JPL-Caltech)*

About Professor Sanjeev Gupta

Sanjeev researches environmental change on planetary surfaces over geological timescales. He is currently working on NASA's Curiosity and Perseverance rovers where his role is to reconstruct what the martian surface was like billions of years ago and to search for evidence of past life.



[Overview and Results From the Mars 2020 Perseverance Rover's First Science Campaign on the Jezero Crater Floor - Sun - 2023 - Journal of Geophysical Research: Planets - Wiley Online Library](#)

Task

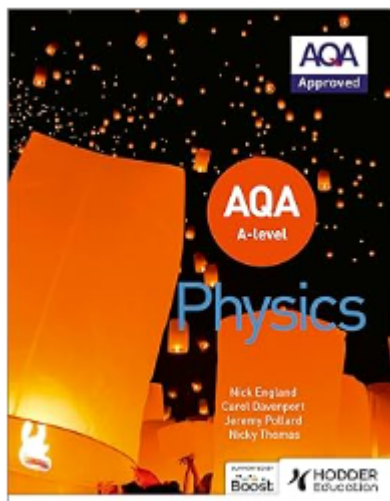
Produce an A4 summary sheet, information booklet, a Power Point or record yourself doing a short presentation looking at all the current Space exploration programmes. You should give the name of the research project and a brief description of the planned research that will be carried out (try to include which country that is funding this) Alternatively, you could do choose to look at the data that Perseverance collected and what the results are hoping to tell us.

How to prepare:

You will need to be organised throughout you're a- level studies, so you will need an A4 (lever arch) folder with at least 6 folder dividers which you can bring to every lesson

Required resources

You are advised to purchase your own copy of the required textbook to bring to lessons.



Optional resources

