Physics Experience 2015-2016

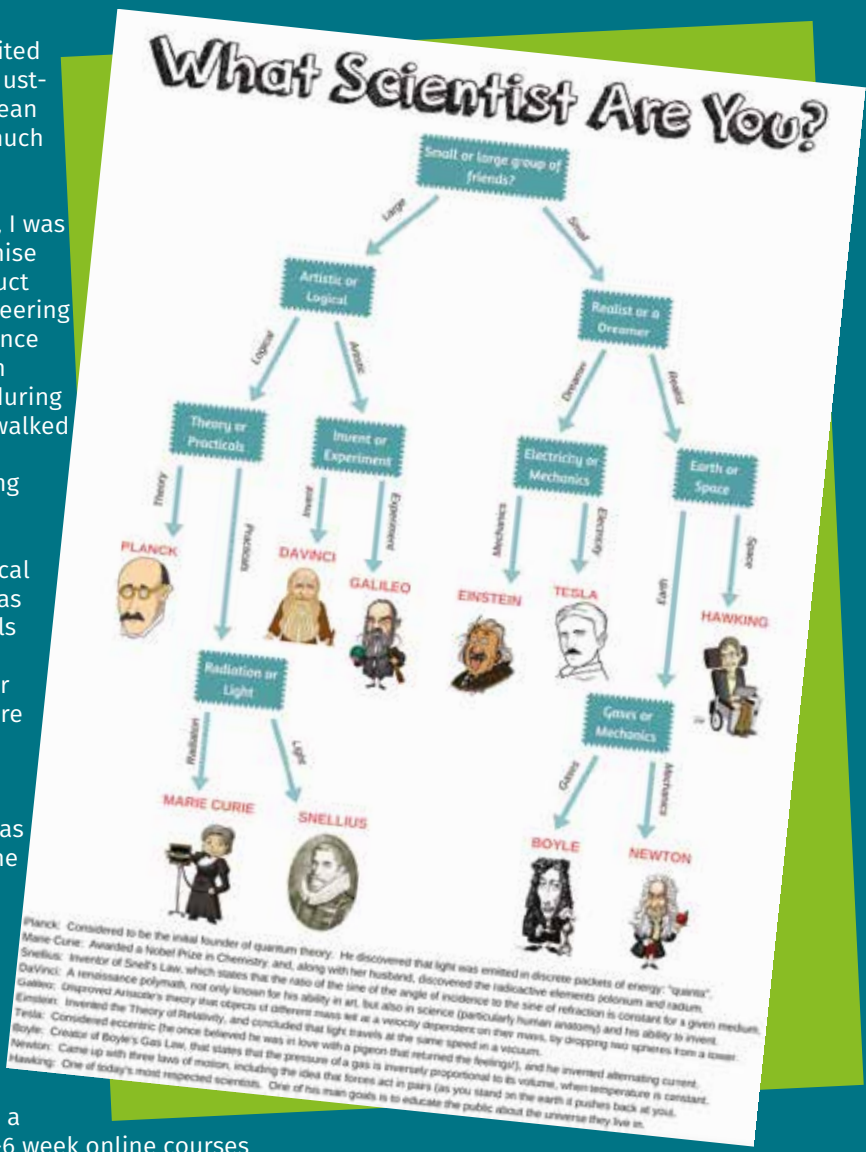
Ilyas Nicholson

With every new topic introduced to me at GCSE, Physics became increasingly interesting and soon became one of my favourite subjects, along with Maths. This consequently resulted in my AS Level subject choices of Maths, Physics, Further Maths and Biology. It became clear to me that I wanted to do something Physics or Maths related as a degree, and possibly even further along in life as a career, but I had very little idea of what my options were and where exactly a Physics-related degree could take me. After much research and advice from my Careers and Physics teacher, I came to understand that Physics had career pathways in a wide range of areas, such as Engineering, Metallurgy, Astrophysics, Medical Physics and Geophysics among others. To fully explore the choices available, I participated in a plethora of activities and events.

Towards the start of the school year, I visited Cambridge and sat an Engineering Masterclass where Cambridge professors gave sample lectures on how lift is generated in planes and the meaning of data, dipping into Aerospace, Mechanical and Software Engineering. The physics behind how a plane actually flies, having to do with differences in air pressure and wing angle, is what piqued my interest and inspired me to explore Engineering in detail.

After attending the Engineering open day at Queen's University Belfast and meeting one of the Electronic and Electrical Engineering (EEE) professors, I applied for a chance to experience a 2 day EEE experience with the EEE department, and I was one of the lucky few selected. During these 2 days, we used computer software to design and then manufacture microsatellites; visited and carried out experiments in the university's esteemed anechoic (non-echo) chamber; visited the various dust-controlled clean rooms and much more.

Furthermore, I was able to organise a 3 day Product Design Engineering work experience with Almac in Portadown, during which I was walked through the manufacturing process of some of the pharmaceutical goods and was given tutorials on how to use computer software, more specifically, Solidworks, to design products. I was even given the opportunity to design a sieve-holder for a live project at Almac.



Additionally, I took part in a number of 4-6 week online courses hosted by various universities throughout the year, including 'Cracking Mechanics', 'Energy', and 'Linear and Quadratic Relations', all of which helped me to discern which direction of Physics/Maths I wish to head into. They were also interactive courses that involved a variety of videos, articles, quizzes and discussions.

Ultimately, taking part in all these activities has provided me with invaluable insight. They have helped me to realise, before filling in my UCAS application, that Engineering is something that was not what I'd originally envisioned. I've realised that the Physics and theory behind ideas in Engineering are what have actually captured my interest. I highly recommend these activities to anyone who is considering a degree in Physics, Engineering, Maths or a related field.