Natural sciences – an ideal course choice for me

Psychology, Success

My readiness to see the interrelated nature of science as well as its individual finer details makes Natural Sciences an ideal course choice. This passion led to my reading ‘ The Disappearing Spoon’ and although it did not answer some fundamental questions I wanted answers to, such as extensively explain how the periodic table works or provide a clear explanation about what electrons do in s-shells compared to in p-shells, it revealed enthralling stories on specific elements in the table. For example, how the element europium made the euro note “ the most sophisticated piece of currency ever devised”. Further research showed this was due to its fluorescence under UV light that made it hard to counterfeit. My desire to both learn about and question the physical world is proven further through a project I shadowed, investigating ways to stop uncontrollable cell division. Following this up with listening to a lecture on cures to cancer using the Large Hadron Collider gave me a good grasp of real-life applications using science and made me aware of the benefits in the advancement of such technology.

During an extracurricular chemistry session, to explore the process of titration, I manufactured aspirin which developed my practical skills and gave me an appreciation for multi-step organic synthesis. It also gave me an understanding of how different factors such as atom economy affect how companies might choose to produce a chemical. Attending a lecture ‘ The Chemistry of the Periodic Table of the Elements’ furthered my knowledge on an atomic level in which the discovery and reactivity of group 1 metals were explained. This made me appreciate the importance of scientific discoveries and demonstrated how Chemistry and Mathematics go hand in hand when

carrying out calculations, confirming the importance of inter-disciplinary knowledge. Also, having read the book ‘ Stuff Matters’ by Mark Miodownik and listening to an online lecture on effects on nanoparticles at ultra-low temperatures, I gained a greater insight into material science which also prompted me to further research recent breakthroughs in physical science such as nanoparticles uses in medicine. There is no better way to apply my scientific knowledge than through problem solving whether it be in group work or individually. Within the last year, I have taken part in the Senior UKMT and the Cambridge Chemistry Challenge having achieved a Silver Award in both. I was able to apply the knowledge obtained during my A-level lessons and take it beyond the syllabus to help answer the questions in challenging and unfamiliar situations. I have also competed in the Ritangle Challenge with four of my classmates developing my communication skills and demonstrating the importance of incorporating collective knowledge to achieve success. In my spare time, I regularly update my science blog evaluating and researching topics that interest me. For example, the introduction to wave-light duality in a Physics lesson led me to post how light is one of sciences irreconcilable paradoxes, being able to act as both a wave and a particle.

I have completed the National Citizen Service and Bronze DofE which has helped build my communication and leadership skills as well as show the importance of community through my time volunteering. I also regularly play club cricket and attend training sessions during the week. This requires a lot of commitment as I have to push myself both physically and mentally, but also gives me the chance to improve my organizational skills, learning to

make effective use of my time management skills. One of the greatest achievements was receiving a Jack Petchey Award for my outstanding performance. Keeping these activities going while studying for four A-levels has warned me that the importance of a proper work-life balance starts at university. However, I look forward to the challenge of studying a wide variety of sciences while working hard to achieve my ambitions.