

Physics was always my favourite subject, as I enjoyed applying maths to real-life situations. I liked the way that everyday events could be broken down into numbers and laws, allowing us to predict what would happen next. We did many experiments in school, and were encouraged to think through our results and try to work out for ourselves the principles that governed the experiments. This was challenging, but it was a great way to learn and allowed us to develop our reasoning skills, and to think independently. One experiment that I particularly remember is investigating centres of mass by sticking different masses of clay to points on the tail of a cardboard parrot balanced on a washing line. The aim was to get the parrot to balance upright by having certain masses at certain lengths. This also led us to work out the principle of moments. I want to do a physics degree because I've always loved physics and enjoyed solving challenging, real-life problems. Doing a physics degree would make use of my maths and science skills and allow me to push the limits of my abilities and understanding. I also hope the degree will give me transferable employable skills, to widen the professions I could go into after completing the degree.

At school, I was a prefect- a responsible position where I was involved in everything from helping out on open evenings to making sure no students were in prohibited areas at lunchtimes. As a science ambassador, I also got to represent the school in events such as the opening of the Physics Factory at King Edwards Five Ways School. This gave me confidence in talking to and working with strangers, which I developed by getting involved in helping out with the KS3 science clubs. This meant I was helping students with their studies but also doing fun and challenging advanced experiments for which there is often no time in lessons. I loved getting involved because it gave me experience at leading groups of teenagers and teaching; which was very fulfilling when they progressed and developed.

Outside of education, I do archery and served on the Warwickshire County junior squad; and am a member of my clubs committee. I hope to get involved in a university archery club, as it would be a great way to socialise and continue with archery even if I live away from home. Archery is interesting for the many physical processes that go on during the action of shooting. Although all the energy in the arrow comes from the archer doing work, it still flies incredibly fast because the work done gets stored as potential energy in the string. This energy is converted into kinetic energy when the arrow is released, and so flies faster than if the archer had put in the same amount of energy to throw it. This is basic physics but it is interesting; because now we understand the principles we can apply them, which has led to the development of different shapes and lengths of bow.

I am a leader at a Girls Brigade company, where I help to plan and lead the sessions, giving girls new skills and giving them new experiences. Although this takes a lot of time and energy, I enjoy it and have built both friendships and skills in thirteen years as a member. To relax, I play the piano. I first grew interested in the piano when my teacher explained how the different lengths and thicknesses of the strings produced the different notes. The fact that a physical concept such as standing waves has such a large impact on everything from music to architecture has really fired my interest and passion for physics.

By allowing me to study at university, I will be able to pursue my interest and passion for physics and learning, and the university will have gained a cheerful, confident and enthusiastic student. As well as studying, I want to get involved in many aspects of student life, such as an archery club and Christian Union. At university, I hope to develop my social skills and become a well-rounded, well-educated member of society.