



## Meet our 2021 STEAM Scholars

### Emily - Medicine

I think a STEAM scholar needs to be determined, hard-working, and resilient. Personally, it's not about who can get the top grades but who works the hardest and who wants it the most. I want to pursue a career in medicine and this scholarship will give me the support I need to get there. With this scholarship, I will be able to access unique opportunities that will set me ahead of my competition and give me the exclusive experience needed to prepare me for the path ahead.

I think that the developments in gene therapy for pain management have been outstanding. This research will potentially create an alternative for opioids in pain treatment, helping reduce addiction rates and reliance on medicines. However, with this research comes the ethical debate of altering genetics and the potential dangers of doing so. Furthermore, I'm currently reading *Junk DNA: A Journey in the Dark Matter of the Genome* by Nessa Carey. This is an incredibly interesting read as it explores the function of the non-protein-coding sections of our DNA and their importance.

I think that my caring nature and my desire to help others will hopefully make me a good doctor. In addition to these qualities, my eagerness to discover and understand new things will also aid me, along with my perseverance and determination.

### Tom - Engineering

A successful steam scholar needs to have ambition, be hard working, persistent and resilient in order to succeed in their chosen field. I applied for the scholarship because of the mentorship programme and internship/work experience opportunities. Being able to develop 'real world skills' is really important for my future career path.

A big issue currently facing humanity is climate change. A large contributor to this problem is commercial aviation and if we want to continue to fly, alternative zero emission aircraft must be developed. Airbus is leading the way into hydrogen fuelled aircraft which are set to be ready by 2035.

I have excellent maths skills as demonstrated in my GCSE results and enjoy solving mathematical problems. These qualities, together with my attention to detail and personal motivation, will ensure my success in being an aeronautical engineer.

### Sam - Medicine

A STEAM scholar must be organised, hardworking and determined. This is to ensure they are able to complete deadlines and achieve the top grades required to reach the career path of their choice. Motivation and a strong drive to succeed are necessary characteristics too because high levels of work must be maintained in order to reach your goal. I applied to the scholarship to give me the best possible chance of becoming a doctor. The additional scholarship support has provided me with relevant literature, internships and a mentor which, in time, will increase my chances of reaching my desired university.

The malaria vaccine being given to children in places such as Ghana and Kenya, after the virus has been around for so long is a positive step in world-wide medicine. After deployment it will save countless lives, and is a great achievement for the teams who worked on it. To be a successful and talented doctor you need to have a genuine want to help people. This is because it takes such a long time to train and learn everything required to be a qualified doctor. I am calm under pressure and have the strive to succeed in all that I do. I want a career that allows me to continually learn and progress in a subject that can branch off into many different areas.

### **Sara - Dentistry**

A characteristic I have that would make me a successful STEAM scholar is that I am very passionate about the subjects I have chosen for A Levels, and I wish to share this passion with younger students and help them find an interest in the sciences.

I chose to apply to the STEAM scholarship to give myself the best opportunity when applying for universities as dentistry is a very competitive career path and with the STEAM scholarship I will be able to stand out with the extra experiences offered by the STEAM scholarship. I also applied for the STEAM scholarship in hope to inspire and help younger students with careers in the medicine field, and help them gain more of an interest in science, and hope that they can find a steam career in the future.

An issue in dentistry is that 72% of people are unable to access oral care in the UK. I hope to change this by training more dentists after I have completed my degree and help reduce the percentage of people unable to access oral care. The attributes I have that are needed when working in a field associated with helping people are qualities such as being able to sympathise with patients and having that caring nurturing side which is vital when treating patients. I have spoken to numerous dentists and all of them have said that studying dentistry takes a lot of hard work and resilience and I am willing to do whatever it takes to achieve the best possible grades to ensure a spot at the best universities and push myself to achieve my goal of one day becoming a dentist.

### **Jake - Engineering**

In order to be a successful STEAM Scholar, you will need to be very determined and hard working. In addition to this you would have to be very innovative and confident in your decisions as a scholar. Also, a successful STEAM Scholar would need to be a great role model for the younger school and be able to inspire others. My aspiration is to go into a career in engineering, particularly aeronautical engineering when I am older, so this great opportunity to get an early head start and insight into that career pathway would be incredible for me. I realise that in the long term it will look great on my CV and to have the early work experience and mentorship that this Scholarship provides, as it will set me on the correct and pathway to start my career in engineering.

Obviously, the recent gas and oil crisis has had a great impact on aeronautical engineers all around the globe. As many countries struggle to get oil and thus produce many raw materials needed to build and innovate any new or even current aircraft. In order to be a good engineer, you will need to be extremely innovate and always be able to improvise and rapidly come up with a new and reasonable solution to any problem you are faced with. A great engineer will also need to have great mathematical and problem-solving skills, which my maths and physics A-levels will hopefully be able to excel. Furthermore, you need to have great time management and be very organised, as aeronautical engineering is a very straining and complex profession so you must be on top of all your work. As it is such a straining and complex profession you will also need to be very determined and motivated to carry on working and reading around your project to gain the full understanding.

### **Harry – Computer Science**

The STEAM scholarship offered everything to me that I was already looking for in the next few years of my educational journey: hands on experience in my dream job whilst still working towards the qualifications I'm aiming for in Sixth Form. To me, it's an opportunity to do what I've always wanted to do in my career.

Game development has always been a key interest of mine, ever since I was in primary school, and the developments in the technology used to create interactive 3D environments (ray-tracing, improved system architecture, newer game engines) really fascinate me and make me excited as to what the future may hold. The neural networks and AI systems being developed at Google, such as the Alpha Zero chess engine, are truly fascinating, and it would be a dream of mine to be able to further advance this field of study.

Computational and logical thinking, problem solving, developed math skills and experience, the ability to communicate with peers and workmates, creativity and forward vision, as well as a drive for what I'm passionate about.

## **Sam – Engineering**

I applied for the STEAM scholarship as I am aware of how competitive engineering is. It may give me an edge over other people applying for further education courses, apprenticeships and employment. Also, the mentor will help me decide which specific field of engineering I would like to enter and give me work experience to gain a good idea of what being an engineer is actually like. Having good problem solving and analytical skills will be important because I expect to be faced with issues where I will not be able to find the solution on the first attempt. Good communication and collaboration skills are also essential as engineers often work in teams.

Current and ongoing issues relating to climate change have sparked my interest in engineering. This is because the various engineering challenges presented by climate change are interesting. In particular, finding sustainable energy sources and ways of reducing carbon emissions.

I believe I am hardworking and motivated to succeeding. These skills are essential to success in any field as you will be competing against other people who you need to have a competitive advantage against. This may be in the form of having a certain qualification which I have worked hard for or having good soft skills such as team working or communication skills that have been practiced and improved.