



The engineer of tomorrow, today.



Written by **George Fryer EngTech MIMechE**
Degree Apprentice (Aerospace), MOD

Usually, an engineer has always had a route to becoming qualified. Attain the required A-Levels. Move to university and pass with honours. Wouldn't it be better if there were more options? Today we have an Aerospace engineer that has carved an entirely different route.



I am an engineer for the MOD. We manage multiple complex projects in support of the Armed forces, essentially any state-of-the-art piece of kit that the Army, Navy or Royal Air Force deploys today has been supported by us.

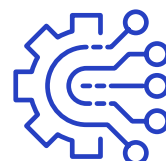
Tell us about yourself and why you have chosen a STEM related career:

My names George Fryer, my pronouns are he/ him. I chose a STEM related career because of the magnitude of change STEM can provide on not just a nation level but the whole world. The decisions we as engineers make can improve all walks of life.

What did you want to be when you were younger?

I had the same dream as many of my friends, I wanted to be a RAF jet pilot. But age gives you experience and a broader outlook on life. This taught me just being at the forefront isn't everything. The technical supporting staff are just as important in everyday work.

"The decisions we as engineers make can improve all walks of life"



What does your current job involve?

I found the role on the GOV.UK apprenticeship site, as I had been interested in degree apprenticeships for a while. Thankfully after going through the recruitment process I was invited to join the MOD. My first year was in full-time education and I've now started the first of a potential 8 placements as a certification engineer. This is simply a team of engineers combing through technical documents to ensure a fleet of aircraft are safe to fly.

Do you have any previous STEM focussed experience?

My previous experience feels like it's gone full circle. Quite alike starting at the MOD as an apprentice, 7 years ago I began my career in the RAF as an apprentice. I joined the RAF as an Aircraft technician (mechanical) spending 6 years in total within the force. During those 6 years I spent time in many countries fixing many types of air platforms.

This included fast-jets, helicopters and large fixed-wing aircraft. During this time, I gained experience in practical engineering as well as learning valuable soft skills that are integral to managing teams. Like how to effectively communicate and work in a team.

Did you struggle at all in your further education?

I was a good GCSE student, looking back maybe I didn't do enough extra work like revision, but got lucky on the marks. The learning curve from GCSE to A-levels was too high for me due to the previously mentioned lack of directed effort. I also really didn't take enough time to think if I would really enjoy the A-levels I was committing to, I was just kind of going through the motions as all my friends were going to uni.

All these factors led me to fail those A-levels. I have since regretted not applying myself and not succeeding in my further education. So, I decided to develop my education through other avenues. As previously mentioned in my previous career I achieved an NVQ level 3 extended diploma in aeronautical engineering. This allowed me to apply for my degree apprenticeship.

Tell us about an aspect of your work that has motivated you.

One of the exciting things to me was my first project week in university. Using a scenario set up by Engineers Without Borders, we had a choice of sector to try and improve such as energy, roads or sanitation etc. The scenario was based on an area

called Cape York, a remote peninsula in northern Australia. We chose to design an energy solution, many factors needed to be discussed and planned as a group and it was the group work in engineering that really motivated me.

What has been the biggest challenge and greatest achievement of your career to date?

One of my biggest challenges to date is moving from a long-term career to education. That move to academia from a career continues to be a steep learning curve. Academia requires critical thinking, academic writing and public speaking, all of which are rigorously marked and moderated. My greatest achievement of my current career to date is getting a first overall in the first year of education!

How does your work impact the world around us?

The work the MOD carries out to procure cutting-edge new kit for all the armed forces impacts everyone. This includes the end user, manufacturers, and the taxpayer etc. In current news the events in Ukraine might be very different if the UK and their peer countries did not invest and manage the lifecycle of new and old kit. The push for sustainability within the armed forces will hopefully reverse previous impacts on the environment.

Why did you join the STEM ambassador scheme?

I joined the STEM Ambassador scheme because I really enjoy volunteering my time for others. In my life I have picked up so many skills from just chatting about people's experiences and how they solve problems. Our next generation will have an entirely different viewpoint on how to solve problems that can give keen insight in the 100 years of tomorrow. Coupled with my engineering experience helps me become a more rounded engineer. In the future with STEM Ambassador, I would like to establish my own regular STEM club in Bath and the surrounding area to regularly reach out to underrepresented young individuals.

Where would you like to be in 10 years?

In 10 years, honestly, I want to be enjoying my work and the people around me. Going on travels and starting a family with my partner. Professionally, I would like to have completed my degree with a 1st class honour and continue my professional development to gain a masters within the MOD. In the same vein as professional development, I want to have gained chartered status as an engineer with IMechE.

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Do you have any top tips for young people considering their future careers?

Be fluid. Colleagues that have had full career changes at 30+ have still succeeded over others sticking with what they know. Make short, medium and long-term plans. This will give you targets to achieve and will guide you with what needs to be done next.

Hopefully my experiences will help some individuals in finding new routes to not only succeed but to enjoy themselves. As engineers we should always be looking for the new challenges and journeys.

Who is the most inspiring person you would like to meet?

Prof Sarah Gilbert is a very inspiring person. In a high stress environment, to produce the beacon of hope the vaccines became at a fraction of a cost compared to market competitors. Even while others were using more technologically advanced mRNA foundations a vaccine was produced in record time.

Glossary

MOD – Ministry of Defence

RAF – Royal Air Force

mRNA – Messenger Ribonucleic acid

IMechE – Institution of Mechanical Engineers