

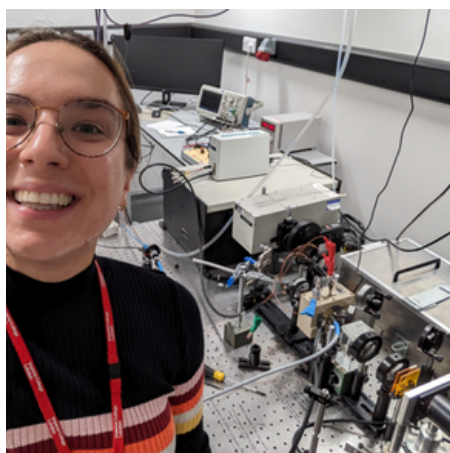
Case studies

Louise Oldham – from student to supervisor

“I was lucky enough to do a Research Placement in 2014 when I was in Sixth Form. It was a biochemistry project assessing the effect of four chemical compounds on ovarian cancer cells and I did it in the Department of Pharmacy at the University of Hertfordshire.

It was the first time I had experience of a scientific research environment, and it was eye opening! I had a great supervisor and felt well-supported.

“The experience was pivotal for me in terms of considering a career in research. Without it I can’t imagine being where I am now.”



The placement was so beneficial to me – giving me hands on experience in a lab, helping me with improving my scientific writing, achieving a Gold CREST Award and giving me something specific to talk about in my personal statement.

Because of this I was looking forward to be at a stage with my own research career when I could pay it forward to the next generation of budding scientists. I used everything I remembered about what made my placement exciting and interesting to help design the student’s project while ensuring it was accessible for a sixth form student.

“It was a great exercise for me as a PhD student and I am encouraging my colleagues to host a student as part of the Research STEM project too.”

David Aggus – from student to Principal Mechanical Designer

“I completed a Nuffield Bursary placement at MBDA in the summer of 2010 in the Mechanical Future Concepts team. During the placement I worked toward a CREST Gold award and completed work aligned with the packaging of a new missile in the very early stages of development at the time. I was also able to get hands-on with hardware and Additive Manufacturing within the Mechanical Engineering department.

“The best aspect of the placement was that it was genuinely fun and helped me make my decision regarding future University courses and indeed my career now. Also the team around me were very friendly and welcoming!”

I went on to study Mechanical Engineering at university and my enjoyment of the placement was a large part of why I didn't choose Computer Science, my initial first choice! I was able to complete two summer placements at MBDA during my University course and I think my Nuffield Research Placement had some bearing on getting these placements!

“I have had various different jobs within mechanical engineering during my career and I enjoyed ‘giving back’ whilst in the Early Careers Programme at MBDA by delivering STEM outreach activities.”

Ben Galbraith – from research student to future researcher

"I completed my Nuffield Research placement in July 2023 at a pharmaceutical company in Stevenage called LifeArc.

My project was titled: "Synthesis of pyrazinamide and chloramphenicol to investigate AMR" – which studied how bacteria becomes resistant to antibiotics.

"My most notable experience during my placement was being able to use real, research-scale scientific apparatus like robotic NMR machines and rotary evaporators."

These were tools we had to learn about at school during my A-level but never had the opportunity to see, let alone use, so this sparked my interest and curiosity.



Conducting my placement at LifeArc inspired me to continue my perusal of biological sciences and persuaded me more in the direction of organic chemistry rather than just cell and molecular biology. This was because my placement helped me realise that I enjoyed the specificity of organic chemistry and the practical applications it has.

Since my placement led me to broaden my scientific knowledge and explore further into chemistry than I had expected, I chose to accept my offer for a Natural Sciences degree at UCL rather than other offers I had received for biochemistry.

"This would allow me to specialise later and let me explore both cell and molecular biology and organic chemistry before I decide which to pursue."

I have been interested in STEM my whole life, however initially I was interested in becoming a lawyer and only began to consider STEM as a career later in secondary school once we had begun to do practicals where I could witness science first hand.

"This, alongside opportunities like my Research Placement at LifeArc is what drove me to pursue science seriously."

I am really enjoying my course at University and I now want to stay in research and to eventually complete a PhD. After which I hope to remain in academia for research, or to become an industrial researcher – but this is a few years away still and I haven't yet decided!

Case studies

Stephanie Baxter – from student to STEMPOINT Trustee

“I was fortunate to be selected for a Nuffield research placement when I was in the sixth form of secondary school. After completing work experience at GSK in Stevenage, I then went on to undertake a Nuffield summer placement where I worked in Analytical Chemistry looking at the preservation of drug samples.

“It was such an exciting and inspirational opportunity to see what chemistry meant in the ‘real world’ and a world of difference to a school classroom.”

I was very nervous of science at school, I was good at it, but didn't particularly understand or enjoy it. My experience at GSK transformed my outlook – from not having an idea about chemistry (it was not even my first choice of A-Level subject!), it was the catalyst for me to pursue a Chemistry degree.



I subsequently received a First Class Honours degree from the University of Warwick and even got published as an undergraduate. None of this would have happened without that first introduction to industry.

Since then, I have remained in STEM related roles. My first job after university was back at GSK where I worked in early stage drug discovery. I then moved into patent law for a few years before finding my niche on Policy, advocating Science and Technology to Government.

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I was honoured when I was asked to be a Trustee of STEMPOINT as not only do I understand the landscape well, my first-hand experience having benefited from the opportunities STEMPOINT provides, has motivated me to make a tangible difference in supporting more young people, especially girls, into science and engineering profession.

I particularly enjoy using my deep understanding of the political landscape, to best leverage opportunities and investment to maximise the charity's impact for children and young people across the East of England region.

Research STEM project

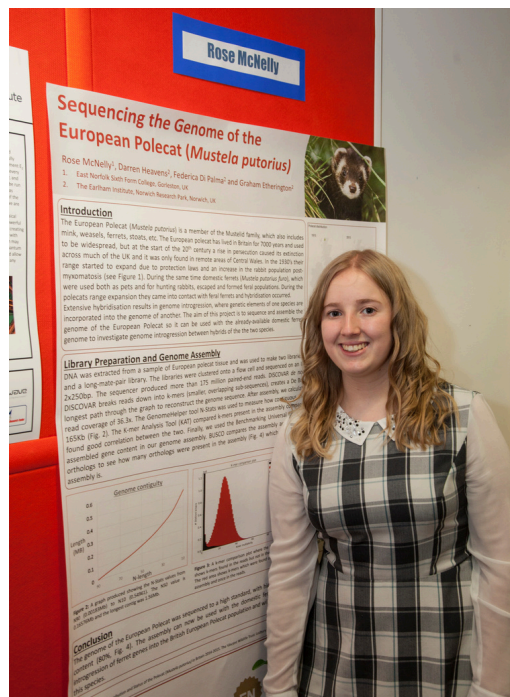
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Rose McNelly – from Research Student to Research Academic

"I undertook my Research Placement in 2016 at the Earlham Institute and the project title was *Sequencing the Genome of the European Polecat (Mustela putorius)*."

"I loved that I was able to go into a real-life lab and do actual science rather than a pre-defined practical where the outcome was more or less expected, which is what I had experienced in high school/sixth form. It felt really exciting to be the first person to do that experiment or find a result."

It was also nice to see and use equipment and techniques which I'd never heard about at high school. Seeing the sequencing machines and cool pipetting robots definitely inspired me and I left thinking that science was super cool, which is perhaps something you don't always appreciate during your A-Levels!



In my project I was fortunate that I got the chance to experience the entire pipeline of genome sequencing from DNA extraction and library assembly to bioinformatics and quality checks. Whereas usually in genomics different people would do different steps. It was great as it made me feel that I had ownership over the project.

"I felt unique as only a few people in the entire institute had experienced all these different steps, so I felt like a mini-expert despite being the least experienced person in the building!"

A few years after my placement, I was fortunate enough to be included as an author on a paper. This was extremely exciting as this was the first time I had seen my name on a publication and is impressive considering I was 17 when I completed the work.

"Completing a Research Placement was fundamental in giving me the confidence to follow the career path I have taken. It inspired me, taught me what day-to-day life was like in academic research and showed me that the scientific community wasn't full of old, white professors, and people like me could have a career in science."

Another considerable benefit for me was how taking part in a Research Placement opened up other doors and opportunities. Following my placement, I submitted my project to the Big Bang Competition and presented my poster at the national finals in Birmingham in 2017 where I was awarded the London International Youth Science Festival prize. I then spent two weeks that summer in London meeting young people from across the globe, hearing lectures from esteemed scientists and visiting some of the country's top scientific institutions. This was a wonderful experience for me and something which would not have been possible without completing my placement.