

Meet the scientist



Name: Dr. James Matthews

Place of Birth: Gloucester, United Kingdom

Place of Work: Bristol, United Kingdom

Job Title: Research Fellow

Who do you work for? The School of Chemistry in the University of Bristol

What do you do? I am an experimental scientist with a focus on measuring air quality. I measure how gases travel through cities and into buildings. I take samples of the air to measure the number and mass of harmful particles and later analysing them to find what they are made of. This involves planning, travelling to take the measurements, analysing the samples then data analysis to compare results to existing measurements and prediction models.

What skills do you have to use in your job? To plan experimental campaigns takes some thought and organisational skill. This needs an understanding of the measurement location and the weather. Some practical skills are needed to keep equipment running in good order and to be able to repair equipment when out taking measurements. The analysis needs some knowledge and understanding of what other scientists have already found, as well as mathematical and analytical skills to understand the results.

Why do you like your job? I like the variety. Even though scientists do specialise, there is room to learn new skills and techniques, travel, and work with different people. I enjoy working with people from different sciences to investigate a problem. It is satisfying to know that we are finding out things about the world that we did not know before.

What inspired you to choose a career in science? Since school, I liked finding out how things work. I would spend time making simple electronic circuits or reading books. I enjoyed maths and science lessons and so it was an easy choice to choose science.