

What's the Point in

Chemistry?

To help you understand the value of chemistry, we've spoken to a number of professionals who still use the skills, qualities and knowledge they gained from the subject at school in the work they do today. Turn over to find out who they are, what they do and what they had to say....

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What's the point in chemistry?

The Pharmacist

Chemistry was a strong component of my pharmacy degree, and the knowledge this gave me is essential to understanding the action of medicines within the body and the properties of medicines in drug delivery. I often call on this knowledge, particularly in my work in the hospital sector.

Catriona Khetyar, Pharmacist at NHS East Berkshire CCG

The Doctor/Finance Director

A key part of my role is being able to explain complex information clearly and concisely, so that I can present convincing arguments in order to help other business leaders make decisions. To do this, I need to gather and organise data, and think sceptically and analytically to present scenarios. These skills are used regularly when studying chemistry, and this has helped me get to where I am in my career.

Dr Helen Astle, Finance Director at BtxAccelyon Ltd

The Biochemist

I use the chemistry I learnt at school every single day to enable me to make the best clinical decisions for every patient. Our bodies are made up of lots of different chemicals and understanding them is the basis of medicine. My speciality is biochemistry and this career wouldn't have been possible without studying chemistry at school. I now have a highly rewarding career where I can make a positive impact on the lives of others.

Kate Fenna, Senior Clinical Biochemist at the Royal Surrey County Hospital

The Director of Operations

Chemistry taught me critical problem solving and data analysis skills that I now use in my day to day work. These skills are key to any management job, and I use them every day to help me understand how many patients my services are treating and whether we are performing well in this area.

Rachel Tustin, Asst Director of Operations at The Hillingdon Hospital NHS Foundation Trust

The Clinical Scientist

Chemistry taught me the scientific method of how to approach a problem, data analysis, and how to create reports. All of these are vital skills used every day regardless of the profession. As a Clinical Immunologist, I perform tests to evaluate the health of my patients. Being able to not only understand how these tests work, but also how to fix them when they go wrong is imperative.

Rehana Ayub, Clinical Scientist (Immunology) at Leeds Teaching Hospitals NHS Trust

The Vet

Working as a Vet requires me to know not only the chemistry happening every second inside an animal's body and cells, but also how this chemistry can go wrong in disease and how we can use medicines to change this chemistry and make sick animals better.

Sara Healey, Veterinary Surgeon

The Radiographer

I studied chemistry at A-level. At the time I did not know it would help my chosen career path as I didn't know what I wanted to pursue! On reflection, electron configuration, fundamental particles, and basic shapes of molecules are used within Radiotherapy education.

Hannah Austen, Therapeutic Radiographer at the Royal Marsden (cancer) Hospital

The Pharmacist

Chemistry gives students the foundation of knowledge needed for a pharmacy degree. GCSE and A-level chemistry form the basics of understanding when it comes to subjects such as pharmaceuticals, such as drug formulation and manufacturing.

Tanya Aubeeluck, Clinical Pharmacist at Salus Medical Services Ltd

The Consultant

Having a knowledge of chemistry is a requirement to study Dentistry. At university I had to learn molecular pathways, such as how paracetamol works and is metabolised. In clinical practice, I must understand the structure of materials for filling teeth to ensure that the best and safest material is used. It is also important that I understand how the products used may interact with human tissues, such as when using regenerative products in surgical procedures to grow bone.

Dr Soureya Seetal, Consultant in Periodontology at Kings College Hospital NHS Trust

The Medical Communications Officer

My role in medical communications doesn't require complex equations or multi-step laboratory techniques, but I still use the skills that I learned in chemistry every day. Fundamentally, chemistry requires both analytical and reasoning skills; I use my analytical skills to weigh up business situations and use qualitative and quantitative approaches to support my decisions. I often work in new areas of medicine. Therefore, being able to understand scientific terminology and quickly assimilate data from publications is invaluable.

Jane Smith, Medical Communications Officer at AMICULUM

The Doctor (research)

Chemistry is not only for those that want to work in a lab. Knowledge of chemistry, even at very basic levels, means that you can understand how medicines work, how to choose the right materials for your designs (from art projects to buildings), and how to assess the risks and benefits of using chemicals in healthcare, beauty, food, cleaning, construction, and other industries. In my work, I use chemistry to understand how to design molecules, particles and materials that can interact with living tissues and promote healing or growth, for example for replacing a fractured bone.

Dr Akemi Nogiwa Valdez, Post-doctoral research associate at Imperial College London

The Pharmacy Director

As my career has evolved, I still find that understanding the laws of thermodynamics and the issues of interactions and energy means that I can apply them metaphorically to other situations involving people, markets and economics. Chemistry has helped my social mobility and financial goals; it has helped me to understand the world, ask critical questions, and look for data and evidence to support everything I do in life.

Nick Horslen, Director at Prestwood Pharmacy Ltd



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