

Careers in Science

What types of job are there in science?

As a scientist, here are some of the types of work you could find yourself doing:

Research and development. Your observations may be used by you or others to devise new products such as drugs, foods, building materials or cleaning agents.

Monitoring industrial processes. You may analyse the products coming off a production line to ensure that they continue to be made to the correct standard in a safe and reliable way.

Monitoring the environment of the earth and beyond. You may be measuring things ranging from the quality of air and water to ensure necessary standards are met, to the output of the sun to help predict the effects of solar storms on communication satellites.

Scientists do more than research, test and measure. If you decide to work as a scientist, you will find yourself spending some of your time presenting your findings to other scientists and possibly to non-technical staff too.

Source: <https://targetcareers.co.uk/career-sectors/science>

Where would you work as a scientist?

Scientists are needed in the public and private sectors and are hired by lots of employers including chemical and pharmaceutical companies, research institutes, universities, food and drink manufacturers, hospitals, environmental agencies,

the government and charities such as Cancer Research.

Source: <https://targetcareers.co.uk/career-sectors/science>

How to get into a science career

If you're interested in a career in science you could

look for higher apprenticeship programmes, which are offered by a few large employers. However, there are also many smaller employers in science and since these tend to take on only graduates - and larger employers also run graduate schemes - you may decide that going to university would suit you better.

The more traditional way into the science sector is by taking a degree in a relevant subject. The degree course you should choose depends on the area of science you want to build a career in. If you are interested in a

career in life sciences or food technology then degrees in chemistry, biochemistry, biology, microbiology,

pharmacology, physiology or food science would be a good bet. If you are interested in working in chemical research and manufacturing then degrees in chemistry, physics, chemical engineering, engineering, metallurgy or material science would be ideal!

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Who are the main graduate employers?

Hundreds of science and pharmaceutical companies have global headquarters or research sites in the UK. These include:

- AkzoNobel
- Amec Foster Wheeler
- Associated British Foods
- AstraZeneca
- BASF
- Bayer
- BP
- Fugro
- GSK(GlaxoSmithKline)
- Met Office
- Novartis
- Procter & Gamble (P&G)
- QinetiQ

- Reckitt Benckiser (RB)
- Roche
- Sanofi
- Science and Technology Facilities Council (STFC)
- Syngenta
- The Technology Partnership (TTP)
- Unilever.

Jobs within science and pharmaceuticals also exist in public sector bodies such as the Department for Environment, Food & Rural Affairs (DEFRA), the Ministry of Defence (MOD), local government and the National Health Service (NHS). You could also work in a university, research organisation or an environmental consultancy.

Source: <https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/science-and-pharmaceuticals/overview-of-the-science-and-pharmaceuticals-sector>

Different science industries you could work in

Life-science industries (includes pharmaceuticals, biotech and crop research)

These industries employ scientists who specialise in life sciences, chemical sciences or a cross between the two. Businesses in this sector are involved with the research, development and supply of drugs to combat medical conditions and diseases; the study of biological systems to come up with novel technologies; and the development of new crop varieties to increase yields and make agriculture more efficient.

As a scientist working in this area, you could do a range of different jobs including:

- devising medically active new compounds
- testing drugs to ensure their safety and effectiveness
- developing safe and effective methods for the bulk
- manufacture of drugs
- monitoring production to ensure drugs are made to the right strength without contamination
- adapting biological systems to novel uses, such as generating energy
- breeding new varieties of plants that improve yields and decrease the need to use pesticides.

Chemical development and manufacturing

Chemical industries mainly employ scientists who specialise in chemical sciences, although they sometimes employ those specialising in life sciences too. These industries produce a whole range of products including paints, plastics, food additives, disinfectants, cleaning products, fuels and lubricants.

As a scientist working in this sector, you could find yourself doing a number of different jobs including:

- researching and developing new products

- checking product safety
- analysing waste to ensure nothing dangerous enters the environment
- monitoring the manufacturing process to ensure that products are produced correctly

Food production and development

These industries employ scientists who specialise in both food and life sciences and occasionally those who specialise in chemistry too. Scientists working in these industries are employed to do a whole range of jobs including:

- product development, including testing for taste and texture (known as mouthfeel)
- ensuring that products are not contaminated with germs or unwanted chemicals
- checking and devising processes that ensure ingredients are mixed and cooked thoroughly
- devising safe and effective packaging for foods.

Other jobs done by scientists

There are other types of work done by scientists. If you decide on a career in science, you could find yourself:

- collecting data on weather and climate and making both short and long-term predictions
- monitoring pollution in the environment and reporting your data to industry or government
- ensuring the health of animals kept in zoos, on farms and in people's homes
- investigating the action of water in the environment and its effects on flood defences
- using scientific methods to date objects found on archaeological digs

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