

SCIENCE



Apprenticeships

TEACHER & CAREER ADVISOR RESOURCES



WHAT ARE SCIENCE APPRENTICESHIPS?

In England, there are several types of science apprenticeships available for students who wish to pursue a career in the sector. These combine on-the-job training with classroom learning, allowing learners to gain practical experience while earning a recognised qualification.

LABORATORY SCIENCE

These apprenticeships are suitable for individuals interested in laboratory work. Apprentices learn to perform various scientific tests, analyse data, maintain equipment, and assist in research projects. They may work in fields such as chemistry, biology, pharmaceuticals, or medical research. Apprentices can also work in materials testing and even in education.

ENVIRONMENTAL SCIENCE

These apprenticeships focus on environmental conservation and sustainability. Apprentices may work in areas such as ecology, environmental monitoring, renewable energy, or waste management. They learn about environmental regulations, data col-

lection and analysis, and sustainable practices.

HEALTHCARE SCIENCE

These apprenticeships are suitable for individuals interested in the healthcare sector. Apprentices may specialise in areas such as medical physics, clinical engineering, pathology, or radiography. They learn to operate and maintain medical equipment, conduct tests, and assist healthcare professionals.

Science apprenticeships have different vocational levels starting from level 2 to level 7.

Science apprenticeships are created through a collaborative process involving several key stakeholders. The following steps generally outline the process of creating an apprenticeship:

Identify Industry Needs: The first step is to identify the skills and knowledge required by a specific scientific occupation. This is typically done through consultation with

A typical research lab, here an apprentice will learn about calibration, data collection and analysis and the ethics of research in science.



employers, industry associations, and other relevant experts. The aim is to determine the skills gaps and ensure that the apprenticeship program aligns with the current and future needs of the science sector.

Development of Apprenticeship Standards: Once the skills requirements are identified, a group of employers, known as a Trailblazer group, comes together to develop the apprenticeship standards. The Trailblazer group collaborate to define the specific knowledge, skills, and behaviours that an apprentice should acquire during the program.

Approval Process: Once the apprenticeship standards are developed, they undergo an approval process. The Trailblazer group submits the proposed standards to the Institute for Apprenticeships and Technical Education (IfATE), which is the governing body responsible for overseeing apprenticeships in England. IfATE reviews the standards to ensure they meet the required quality criteria, align with the national apprenticeship framework, and are suitable

for assessment.

Funding and Delivery Models: Concurrently with the approval process, discussions take place regarding the funding and delivery models for the apprenticeship. This involves determining how the costs of training and assessing apprentices will be covered, and deciding on the role of training providers, employers, and government funding in the process.

Development of Training Materials and Assessment Methods: Once the apprenticeship standards are approved, training providers and employers work together to develop the necessary training materials and assessment methods.

Delivery and Assessment: Apprentices typically split their time between on-the-job training with their employer and off-the-job training provided by a training provider. They acquire the required skills and knowledge through a combination of practical experience, classroom-based learning, and assessments. The assessments are designed to measure the appren-

tice's competency and ensure they meet the standards set for the apprenticeship.

Certification and Completion: Upon successful completion of the apprenticeship, apprentices undergo an End Point Assessment before receiving a certificate that recognises their achievement. This will be in the form of a nationally recognised apprenticeship certificate and could also lead to professional recognition specific to the science industry. The certification serves as evidence of the apprentice's competence and can be valuable for their future career progression.

End Point Assessments are carried out by independent awarding organisations to assess the apprentice against the knowledge, skills and behaviours developed on program.



Department
for Education