Unit 1: Starting Work in the Science Sector

Unit reference number: L/505/0337
QCF level: 1
Credit value: 3
Guided learning hours: 30

Unit aim

The aim of this unit is to enable learners to develop an awareness of the different types of job available in the science sector. They will also explore the skills and personal qualities that such jobs require.

Unit introduction

In this unit learners will explore the requirements for starting work in the science sector which offers a wide range of job opportunities.

Learners will find out about organisations that use science such as hospital trusts, plastic, glass, cement or paint manufacturers. These organisations usually have at least one department focusing on science, for example an analytical laboratory, research laboratory or plant nursery.

There is a wide range of job roles for people employed in science-based organisations. Learners will explore the scientific activities of local organisations and examine available jobs.

Learners will investigate the skills and personal qualities needed for employment in the science sector. These include the ability to follow health and safety procedures.

Essential resources

Learners need access to information which can be obtained from employers, chambers of commerce, local careers officers, careers libraries, job centres, recruitment agencies, newspapers, specialist magazines and training providers.

Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit learners should:

Learning outcomes		Assessment criteria		Unit amplification
1	Know about different types of jobs within the science sector	1.1	Describe types of organisations that use science	*Types of organisation*: e.g. private business, public sector, education and training, leisure
		1.2	Compare and contrast the scientific activities of local organisations	*Scientific activities*: e.g. health, education, pharmaceutical, biotechnology, genetic engineering, cosmetics, beauty therapy, food, fine and bulk chemicals, petroleum, plastics, textiles, water, waste disposal
		1.3	Describe two different job roles in the science sector	*Job roles*: e.g. research, manufacture, testing, education *Job titles*: within the science sector, e.g. laboratory technician, plant operator, assistant practitioner, research assistant, scientific writer, biomedical scientist, chemist, forensic scientist, environmental officer
2	Know about skills and qualities required for jobs in the science sector	2.1	Describe specific skills and personal qualities needed for scientific job roles	*Skills*: for scientific job roles, e.g. essential and desirable requirements, qualifications, experience, awareness of health and safety procedures *Personal qualities*: for scientific job roles, e.g. punctuality, reliability, honesty, initiative, responsible, communication skills, manual dexterity, ability to follow instructions

Learning outcomes		Assessment criteria		Unit amplification
3	Know the terms and conditions of jobs in the science sector	3.1	Compare the terms and conditions of two jobs in the science sector	*Ways of working*: e.g. part-time, full-time, temporary, seasonal, permanent, freelance, skilled, unskilled, operative, supervisory *Accessing terms and conditions*: contract of employment; staff handbook; public notices *Terms and conditions*: salary, e.g. hourly, monthly, annually; work patterns, e.g. hours of work, shift patterns, flexitime, annual leave; holidays, e.g. annual leave, public holidays, maternity, paternity; benefits, e.g. pensions, health schemes, meals, staff facilities; codes of practice, e.g. clothing

Information for tutors

Delivery

Learners should gain a general knowledge of the types of jobs available in the science sector. Exploration of further qualifications needed for progression to specific types of scientific employment should be encouraged.

Much of the work for this unit could be based on personal research by learners, for example, visits to a workplace where learners can interview people who are employed in the science sector in different job roles, either on a one-to-one or on a group basis. Alternatively, guest speakers could be invited. Learners could contact professional bodies and employers about careers and should be encouraged to look for science jobs in newspapers and journals.

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

To achieve learning outcome 1, learners must describe four different types of organisations in the science sector. They must also compare and contrast the scientific activities of two local organisations and describe two different scientific job roles. This could be evidenced as a presentation or a poster/leaflet.

To achieve learning outcome 2, learners must describe specific skills and personal qualities needed for science jobs. This could be evidenced as a report, a presentation or a poster/leaflet. Learners could relate their findings to a job that appeals to them.

To achieve learning outcome 3, learners must compare the terms and conditions for two jobs in the science sector. They must also discuss procedures for monitoring employee performance. Assessment evidence could be in the form of a report or presentation.

Suggested resources

Websites

Association for Science Education	www.ase.org.uk
Association of the British Pharmaceutical Industry	www.abpischools.org.uk/page/careers.cfm
Biochemical Society	www.biochemistry.org
Excellence Gateway	www.excellencegateway.org.uk
The Forensic Science Society	www.forensic-science-society.org.uk/Careers
GlaxoSmithKline	www.gsk.com/careers
Institute for Education Business Excellence	www.iebe.org.uk
Institute of Biomedical Science	www.ibms.org
Institute of Physics	www.iop.org
The Institution of Environmental Sciences	www.ies-uk.org.uk/
New Scientist	jobs.newscientist.com/
Royal Society of Chemistry	www.rsc.org
Sector Skills Council for Science, Engineering and Manufacturing Technologies	www.semta.org.uk
Science, Technology, Engineering and Mathematics Network (STEM)	www.stemnet.org.uk/
Society of Biology	www.societyofbiology.org