



SVQ in Laboratory and Associated
Technical Activities (Educational
Science) at SCQF Level 6

Qualification Reference Number
GR47 46

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PERSONAL COMPETENCE SUMMARY

Name	Company/Centre
Job Title	GQA Registration Number

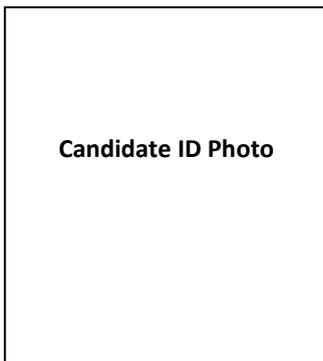
Unit Number	MANDATORY UNITS	SCQF Level	SCQF Credit	ASSESSOR SIGNATURE	DATE
LATA 2-01	Follow health and safety procedures for scientific or technical activities	5	6		
LATA 2-02	Maintain effective and efficient working relationships for scientific or technical activities	6	3		
LATA 2-03	Use information recording systems for scientific or technical activities	6	6		

Group 1- Candidates must take a minimum of 2 units

Group 2 - Candidates must take a minimum of 1 unit

RELIABLE EVIDENCE: The forms of evidence available include (☐ as appropriate)

Observation in the workplace		Simulation(s)	
Oral assessment of knowledge		Work records	
Written work/assignment		Photographs/Video	
Witness statement(s)		Audio	
Testimonial(s)		Products	
Other (please state)			



	Name and Signature	Date
Candidate		
Lead Assessor		
Internal Verifier		
EQA		

INTRODUCTION TO THE QUALIFICATION

Who is this qualification for?

This qualification provides recognition of the skills and knowledge of individuals working in laboratory and associated technical activities, specifically in an educational environment, and has been developed from the relevant National Occupational Standards (NOS).

It is not expected that all candidates for this qualification will all carry out the same activities, so the qualification is structured to ensure that there is a high degree of flexibility in the choice of units.

What is required from candidates?

Candidates should achieve all 8 mandatory units listed below, plus a minimum of 2 of the optional units in Optional Group 1 and a minimum of 2 units from Optional Group 2.

Guidance on the evidence that will be acceptable is contained in the introduction to each unit.

Unit Number	Mandatory Units	Level	Credit Value
LATA 2.01	Follow health and safety procedures for scientific or technical activities	5	6
LATA 2.02	Maintain effective and efficient working relationships for scientific or technical activities	6	3
LATA 2.03	Use information recording systems for scientific or technical activities	6	6
Group 1 - Candidates must take a minimum of 2 units			
LATA 2.04	Carry out routine maintenance, cleaning and checking of scientific or technical equipment	6	9
LATA 2.08	Prepare resources and equipment for scientific or technical learning activities	5	4
LATA 2.09	Clean and tidy the workplace after scientific or technical learning activities	5	3
LATA 2.10	Provide support for scientific or technical learning activities	7	7
Group 2 - Candidates must take a minimum of 1 unit			
LATA 2.06	Prepare compounds and solutions for scientific or technical use	7	15
LATA 2.05	Maintain stocks of resources, equipment and consumables in life sciences and related industries	6	4
LATA 2.11	Prepare new scientific or technical methods, resources, and equipment for learning activities	7	10
LATA 2.07	Demonstrate scientific or technical methods, techniques, and skills to others in the workplace	7	8

Assessment Guidance

Evidence should show that the candidate can cover the scope of performance outlined for each relevant unit consistently over an appropriate period of time.

Types of evidence:

Evidence of performance and knowledge is required. Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Potential sources of evidence:

The main sources of evidence for each unit will be observation of performance and questions to show underpinning knowledge. This can be supplemented by the following types of physical or documentary evidence:

- Work products
- Organisational documentation
- Audio/photographic/video
- Delivery records
- Witness testimony
- Professional Discussion
- Inspection reports
- Notes and memos
- Candidate statements
- Organisational reports
- Simulation of accident or emergency

Please Note that photocopied or downloaded documents such as manufacturers' or industry guidance, H&S policies, Risk Assessments etc, are not normally acceptable evidence for GQA qualifications unless accompanied by a record of a professional discussion or Assessor statement confirming candidate knowledge of the subject. If you are in any doubt about the validity of evidence, please contact your GQA External Quality Advisor.

GQA QUALIFICATION IMPLEMENTATION REQUIREMENTS COVERING CENTRE APPROVAL, CANDIDATE ASSESSMENT AND ONGOING QUALITY ASSURANCE

This document indicates the requirements of Approved Centres delivering GQA qualifications and / or units of credit.

1. Equality of Opportunity

Equality of access to fair and valid assessment is necessary for all candidates undergoing assessment. This may mean making reasonable adjustments to normal assessment methods for candidates with particular or special assessment requirements. Candidates work patterns should not become a barrier to assessment, the organisation of which may have to be flexible. In the same way, reasonable adjustment arrangements may be necessary for candidates with a disability. For example, a candidate who is unable, through disability, to produce oral or written evidence, may be allowed to use the method they normally use as a substitute for the required form of communication. Reasonable adjustments need to be approved by GQA.

2. Recognised/Approved Assessment Centres

2.1 Individual centres must be approved by GQA to offer specific qualifications and / or units of credit. A centre may be a single organisation or a partnership of two or more organisations. It may operate at a single location or have satellites. For further details see the GQA booklet "Guide to Centre Approval". The Centre Approval process is carried out by a GQA approved EQA. Each Centre must maintain a centre file. It is important to be clear what the steps in the assessment process are:

- plan evidence collection and opportunities for assessment
- collect evidence
- judge evidence
- determine whether sufficient evidence has been presented
- make an assessment decision and give feedback to the candidate

NB Any deviation from the norm must be approved by a GQA EQA

2.2 Assessors and Verifiers

All Assessors of candidate performance must be competent, to make qualitative judgements, both in the skills they are assessing and in the assessment of candidates and hold the appropriate Assessor national award. Assessor occupational knowledge related to the qualifications being assessed is essential and must be illustrated to GQA prior to approval.

Internal Verifiers are responsible for the quality assurance of the assessment process within a centre. They should have a relevant occupational background, be competent in internal verification and hold the Internal Verifier national award. It is recommended that Internal Verifiers work towards national recognition of assessor competence.

EQAs are responsible for ensuring accurate and consistent standards of assessment across centres, qualifications, units of credit and over time. They should have a relevant occupational background, be competent in external quality assurance and hold the EQA national award.

GQA will approve and licence all individuals involved in the assessment and verification of its approved qualifications and / or units of credit. Individuals who are working towards the Assessor or Internal Verifier national awards can only be provisionally licensed. The judgement of provisional licence holders will need to be agreed/authorised by a fully qualified and GQA licensed individual who cannot carry out a dual role in relation to a specific candidate.

All GQA Assessors and Verifiers must undertake a minimum of 2 significant CPD activities in both occupational areas and assessment and verification. Reflective CPD records must be maintained and made available to GQA EQAs for review.

2.3 Centre Approval, Monitoring Reviews and Quality Assurance

The centre recognition/approval process is the start of a significant part of the awarding body's quality assurance system. The Approval process will begin with an EQA review of centre procedures to ascertain the potential centres ability to deliver GQA qualifications and / or units of credit. Centres will be expected to meet the relevant regulatory authority criteria for delivery of qualifications prior to initial approval; continued compliance with the criteria will be monitored through regular EQA visits. It is recommended that centre reviews are conducted at minimum every six months by a GQA EQA.

New or multi-site centres may be required to undertake quarterly or more frequent EV reviews to ensure that different locations can be seen to satisfy the national requirements.

GQA will ensure that unacceptable barriers relating to the assessment and internal verification of candidates in small companies do not deny recognition of competence to competent young workers. In such circumstances, GQA will demonstrate that its quality assurance procedures remain sufficient and rigorous to ensure that the competence outcomes have standing and credibility in the occupational area.

Enhanced quality procedures to ensure consistency of assessment and verification will be necessary and will include:

- a high level of sampling of assessment decisions N.B. In some instances the EQA may visit each assessment location and qualification / unit of credit candidate (e.g. single candidates dispersed throughout different small companies on government funded programmes)
- an in-depth scrutiny of assessment plans, materials and records
- specific centre guidance aimed at the successful implementation of qualifications and / or units of credit in SMEs via approved centre partnerships. This can include guidance on the quantity and quality of valid, authentic, and transferable evidence expected to be attributed to individual candidates
- ensuring centres are following the requirements prescribed in any appropriate assessment strategies and applicable codes of practice
- the identification and publication of good practice in centres

As part of the Quality Assurance process Proskills require an Enhanced External Verification process. This will be in the form of 1 significant underpinning knowledge question answered by the candidate for each unit of the qualification. The questions will be decided by GQA, and guideline answers must be submitted for approval and once approved kept in the Centre File to allow independent assessment

3. Qualification / Unit of Credit Candidates

All candidates must register with a GQA recognised/approved centre. The centre must maintain appropriate candidate personal details for external audit purposes etc.

The centre will provide candidates with advice and guidance on how to prepare for assessment and allocate an Assessor who will assess candidate ability to meet the requirements of the relevant qualifications / unit of credit. It is the candidate's responsibility to demonstrate competence and to do this they must:

- prove they can consistently meet all the qualification and / or unit of credit criteria
- provide evidence from work, that they can perform competently in all the contexts specified in the qualification / unit of credit requirements
- prove that they have the knowledge and understanding required to perform competently, even where they have not provided evidence from the workplace

It is therefore critical that quality evidence is provided in a format to allow the Assessor to make a decision and for the Internal Verifier to audit/verify his/her decision.

4. Evidence

A qualification and / or credit is awarded when a person has achieved the necessary outcomes of the qualification and / or unit of credit.

The specific combination of units necessary to achieve a qualification is detailed in the qualification structure.

Certificates of Unit Credit can be awarded when candidates achieve any one, or more, units from the qualification.

The evidence the candidate brings forward is primarily evidence of performance of what he/she can do, not just what he/she knows. The assessment criteria / qualification requirements are described within the qualification and / or unit of credit itself and can incorporate practical skills and knowledge.

The assessor's role is to judge each relevant item of evidence. Each must be judged against the qualification and / or unit of credit requirements. It is not sensible to collect evidence against individual criteria. Nor is it effective. If items of evidence were collected for each of the criteria, the candidate may have to produce many items of evidence, well above the number actually required. GQA recommend holistic assessment.

When judging each item of evidence, the assessor is deciding whether the evidence:

- is authentic – i.e. actually produced by the candidate
- meets the criteria
- relates as appropriate to a context defined within the qualification and / or unit of credit
- confirms that the candidate has the required underpinning knowledge in the qualification and / or unit of credit over time and range of work. The assessor must judge how long a time period is enough to be confident that the candidate can perform reliably to the standard. Unsupported evidence i.e. based on a single assessment/visit will not normally prove consistency.

When the assessor makes a decision about the candidate's competence, he or she examines all the evidence available to determine:

- if the evidence, as a whole, covers all the evidence of achievement
- whether the evidence indicates consistency in competent performance
- whether there is enough evidence on which to base an inference of competence

The answer can only be:

- yes (the candidate is competent)
- no (the candidate is not yet competent)
- there is insufficient evidence to make a decision

Consistency means that the individual is likely to achieve the standard in their work role, in the different activities defined

Performance evidence

Performance evidence can be what the individual actually produces, or the way the individual achieves the standard. One is called product evidence and the other process evidence.

Product evidence is tangible – you can look at it and feel it. Products can be inspected and the candidate can be asked questions about them.

In order to make a fair and objective assessment, the assessor must be able to answer the question: Is there sufficient evidence that the candidate can consistently meet the requirements of the qualification and / or unit of credit?

Process evidence describes the way the candidate has achieved an outcome – how they went about it. This may be, for example, the way the quality of products is checked or the way customer complaints are handled. This usually means observing the candidate in action.

Performance evidence may cover a number of outcomes. It makes sense to plan evidence collection so that what the candidate does, in the normal course of their job, can be related to different outcomes and units. The activities that clearly link to the qualification and / or unit of credit requirements are the things to concentrate on when planning evidence collection and assessment and when monitoring the candidate's progress. Look for opportunities in the candidate's job when evidence can be collected against a number of units at the same time.

Performance evidence can be:

- Naturally occurring – evidence produced in the normal course of work. Evidence of this sort is usually of high quality and reliable. It is also cost effective to collect naturally occurring evidence
- Taken from previous achievements – the candidate may be able to bring forward evidence from previous work experience to show that they are still competent to the standard.
- Evidence of prior achievement can be used when it can be shown to support a judgment that the candidate can still achieve the standard. So, the assessor must be satisfied that the evidence of prior achievement is sufficiently reliable to justify saying that the candidate is currently competent.
- Simulated – from circumstances specially designed to enable the candidate's performance to be assessed.

Simulation is generally not acceptable. The exceptions to this are:

- o Dealing with emergencies
- o Dealing with accidents
- o Certain pre-approved real time simulators
- o Limited other procedures that cannot be practically performed in the workplace, and for which sufficient evidence can be collected through other means.

NB: It is not always possible or feasible to collect naturally occurring evidence. It is likely that some simulation may be needed, when it may take too long to wait for the evidence to arise e.g. it may be an aspect of performance which occurs infrequently. An example of this may be evidence of how to deal with emergencies i.e. it makes sense to look for evidence from sources other than naturally occurring ones, rather than for, say, waiting for the building to burn down. Centres must obtain GQA EQA approval prior to the use of simulation.

Knowledge evidence

Being able to achieve a standard requires the ability to put knowledge to work. The qualification and / or unit of credit indicates the knowledge each person should use if they are to perform competently.

It should not be necessary to test all of the candidate's knowledge separately; however, any exception to this would be detailed in the relevant Assessment Strategy. Performance evidence could show that the candidate knows what

he or she is doing. When this is not the case, or if the assessor is not convinced from the performance evidence, it may be necessary to check the individual's knowledge separately.

Oral or written assessments must clearly provide a suitable means of checking the breadth and depth of an individual's knowledge. Assessors will need to judge the best mix of knowledge evidence according to individual circumstances. Knowledge evidence is useful when deciding the quality of performance evidence, but must not be used in isolation to judge competence or as an alternative to performance evidence. Care must be taken that candidate evidence is auditable and verifiable.

NB: These Qualification implementation guidelines are generic across the full range of GQA qualifications. Further guidance on acceptable evidence on each qualification will be found in the Introduction to the Qualification section of the candidate booklet

SVQ CANDIDATE DECLARATION

Candidate Name.....

Centre/Company Name.....

Assessor(s) Name(s)

I acknowledge receipt of this copy of the GQA qualification booklet. The unit structure provides information on which units must be achieved to be awarded the SVQ. The individual units detail the necessary requirements etc that I must achieve. I understand that I will have an important role in preparing for and planning assessments and with guidance from the assessor I will collect and record relevant evidence.

I understand that all evidence should be produced by me or be directly attributable to me.

I have been informed of the appeals system and have been issued with a copy of the appeals procedure, should I want to appeal against any part of the assessment process.

I understand the assessments will be carried out with regard to the company/centre Equal Opportunities Policy.

Candidate Signature

Date

UNIT LATA 2-01 FOLLOW HEALTH AND SAFETY PROCEDURES FOR SCIENTIFIC OR TECHNICAL ACTIVITIES (Level 5, 6 Credits)

Unit Overview

This unit covers the competences you need to follow health and safety procedures for scientific or technical activities in accordance with approved procedures and practices. You will be required to demonstrate your compliance with health and safety requirements, organisational policy and procedures for the work that is undertaken. You must be able to recognise the limitations of your own competence with the work and ask for appropriate help and advice when it is needed, take responsibility for your own actions and for the quality and accuracy of the work that you carry out. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment; however, simulation is permitted where assessment in the workplace is not possible but should only be used as identified in the Assessment Strategy.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Accurately assess health and safety in relation to your work and the workplace
- P3. Use safe practices and the appropriate personal protective clothing and equipment for the work
- P4. Identify any breaches to health and safety procedures and report them to the appropriate person as soon as possible
- P5. Ensure that you maintain and keep tidy your work area to a standard of health and safety which is consistent
- P6. Prepare, maintain and use equipment and materials in accordance with manufacturers' instructions and local safety regulations
- P7. Recognise hazardous materials used in your work activities
- P8. Follow established procedures to protect yourself and others during work activities
- P9. Follow the correct procedure when an emergency arises or is suspected

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Identify health and safety standard operating procedures for all of the following:

- 1.1 workplace hazards
- 1.2 unsafe practices
- 1.3 spillages
- 1.4 manual handling
- 1.5 VDU & RSI policies
- 1.6 other (please specify)

2. Recognise three of the following workplace hazardous substances:

- 2.1 flammables (liquid or solid)
- 2.2 radioactive material
- 2.3 pyrophoric material
- 2.4 corrosive material
- 2.5 water reactive material
- 2.6 oxidiser
- 2.7 equipment or tools
- 2.8 explosive material
- 2.9 unstable reactive
- 2.10 toxic/harmful material
- 2.11 extreme temperature
- 2.12 sensitising/irritant substance
- 2.13 biological material
- 2.14 compressed gas

3. Follow established procedures for both of the following:

- 3.1 workplace emergency (e.g. injury, spillage)
- 3.2 workplace evacuation (e.g. fire, gas leak)

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The standard operating procedures, as set down in local operating manuals and schemes of work
- K4. The importance of following manufacturers' instructions
- K5. The techniques and processes you must use correctly in the workplace
- K6. The importance of wearing protective clothing, gloves and eye protection when handling hazardous materials
- K7. The specific safety precautions to be taken when working with scientific or technical equipment and computer-based systems (to include such things as safety guidance relating to the use of visual

display unit (VDU) equipment and work station environment (such as lighting, seating, positioning of equipment), and repetitive strain injury (RSI))

- K8. The identity of health and safety representatives
- K9. The location and correct use of emergency equipment
- K10. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K11. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K12. Local procedures for emergency evacuation
- K13. The location of fire alarms call points and how to operate them
- K14. The location of spillage kits, and the procedures to follow in the event of spillages of chemicals and/or biological fluids and materials
- K15. The control of substances hazardous to health (COSHH) regulations, and their application in the workplace
- K16. The types of hazards which may be present in the workplace and how these can be controlled
- K17. The correct storage and disposal procedures for hazardous materials
- K18. The hazards associated with chemicals, radioactive substances and biological material
- K19. The reasons for cleaning work surfaces and equipment
- K20. Why it is important to differentiate and segregate categories of waste
- K21. The correct procedures for the storage, transport and disposal of waste

Assessor Comments/Feedback

UNIT LATA 2-02 MAINTAIN EFFECTIVE AND EFFICIENT WORKING RELATIONSHIPS FOR SCIENTIFIC OR TECHNICAL ACTIVITIES (Level 6, 3 Credits)

Unit Overview

This unit covers the competences you need to work effectively in science related work activities, in accordance with approved procedures and practices. You will be required to demonstrate how you can establish and maintain relationships and how you deal with others. You will demonstrate how to deal with disagreements. The learner will meet organisational standards for behaviour in accordance with the relevant workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection clothing and equipment (PPE) when doing scientific or technical activities
- P3. Establish and maintain effective working relationships in the workplace
- P4. Meet workplace standards for timekeeping, appearance and behaviour
- P5. Deal with disagreements in an amicable and constructive way, so that good relationships are maintained
- P6. Maintain communication with others, to ensure that they are kept informed about any work plans or activities which may affect them
- P7. Be aware of the limits of your skills, and seek assistance from others in a polite and courteous way without causing undue disruption to normal work activities

- P8. Review your personal performance and development, with the appropriate people, at regular intervals
- P9. Communicate the required information about the work done, to authorised people, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

- 1. Sustain positive working relationships by all of the following:
 - 1.1 working in teams
 - 1.2 being cooperative and flexible
 - 1.3 supporting others
 - 1.4 providing clear and accurate information
- 2. Maintain working relationships with two of the following:
 - 2.1 colleagues in your own working group
 - 2.2 colleagues outside your normal working group
 - 2.3 supervisors/managers
 - 2.4 persons external to your organisation
 - 2.5 more senior professionals/scientists
- 3. Review personal development objectives and targets, to include one of the following:
 - 3.1 dual or multi-skilling
 - 3.2 increased responsibility
 - 3.3 training on new equipment/technology
 - 3.4 other specific requirements
 - 3.5 understanding of company working practices, procedures, plans and policies
- 4. Record details of work done, and communicate the details to the appropriate people, using:
 - 4.1 verbal report

Plus one method from the following:

 - 4.2 written or typed report
 - 4.3 computer-based record
 - 4.4 specific company documentation
 - 4.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities

- K5. The importance of correct identification, and any unique workplace coding system
- K6. The interactions which take place between your scientific or technical speciality and others where the same speciality is used
- K7. How your scientific or technical work activities may affect others within the department and the work place
- K8. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K9. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K10. The lines of accountability within the department
- K11. The reasons why good working relationships are important
- K12. How to create and maintain good working relationships
- K13. The methods of working effectively with others
- K14. The problems that can affect relationships in the workplace
- K15. The procedures for dealing with disagreements within the workplace
- K16. The departmental performance review process, and your role in this process
- K17. The reasons why effective communication is important, and the methods used for communicating effectively

Assessor Comments/Feedback

UNIT LATA 2-03 USE INFORMATION RECORDING SYSTEMS FOR SCIENTIFIC OR TECHNICAL ACTIVITIES (Level 6, 6 Credits)

Unit Overview

This unit covers the competences you need to use information recording systems for scientific or technical activities in accordance with approved procedures and practices. You will be required to demonstrate that you can keep information systems up to date, store the information correctly and accurately and retrieve information in accordance with workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Keep information systems up to date and store the information correctly and accurately
- P3. Maintain the security and confidentiality of information at all times
- P4. Complete required back-up procedures regularly
- P5. Retrieve required information and distribute according to deadlines
- P6. Communicate information to the relevant people when using information systems
- P7. Take appropriate action in the event of problems, to minimise hazards, waste loss of materials or resources and report to the relevant people
- P8. Work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
- P9. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Use two of the following types of information system:
 - 1.1 paper based
 - 1.2 computer based
 - 1.3 telephone
 - 1.4 fax
2. Establish four of the following for work related activity:
 - 2.1 date of request
 - 2.2 scheme of work
 - 2.3 person requesting activity
 - 2.4 work activity requirements
 - 2.5 work location
 - 2.6 materials/resources needed
3. Resolve two of the following problems associated with work activity:
 - 3.1 incorrect identification of requirements
 - 3.2 poor/unclear written request
 - 3.3 missing information
 - 3.4 requests exceed available supply
4. Communicate information systems data with relevant people to include one of the following:
 - 4.1 supervisor
 - 4.2 team leader
 - 4.3 health and safety officer
 - 4.4 manager
 - 4.5 head of department
 - 4.6 teacher or trainer
5. Record details of work activities, and communicate the details to the appropriate people, using:
 - 5.1 verbal report

Plus one method from the following:

- 5.2 written or typed report
- 5.3 computer-based record
- 5.4 specific workplace document
- 5.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K8. The skills and procedures needed to do the routine tasks and work activities allocated
- K9. The importance of completing tasks and procedures to the required organisational standard
- K10. What are the different types of information systems that can be used, including recording, filing, retrieval of information and distribution systems
- K11. How to use backup systems and why they are important
- K12. How to ensure the confidentiality and security of information at all times and why this is important
- K13. Why it is important to work within given time deadlines
- K14. What methods to use for information storage and access
- K15. Why it is important to establish requirements accurately
- K16. What documentation should be used
- K17. Who are the relevant people
- K18. How to identify problems, and what is the appropriate action to take within the limits of your responsibility

Assessor Comments/Feedback

UNIT LATA 2-04 CARRY OUT ROUTINE MAINTENANCE, CLEANING AND CHECKING OF SCIENTIFIC OR TECHNICAL EQUIPMENT (Level 6, 9 Credits)

Unit Overview

This unit covers the competences you need to demonstrate that you carry out routine maintenance, cleaning and checking of scientific or technical equipment in accordance with approved procedures and practices. You will be required to demonstrate that you can undertake the routine maintenance and cleaning of scientific or technical equipment, identifying and reporting faults and recording maintenance and cleaning procedures undertaken in accordance with the relevant workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Confirm that the scientific or technical equipment is in a safe and usable condition, according to established procedures
- P4. Identify and report any equipment faults accurately to the team leader
- P5. Perform routine maintenance in accordance with manufacturers' instructions and relevant health and safety legislation
- P6. Confirm the correct operation and operating tolerances of the scientific or technical equipment, in accordance with established procedures
- P7. Record details of maintenance and operation checks, according to departmental procedures
- P8. Test the equipment to confirm that it functions correctly, and record the equipment status
- P9. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Carry out all of the following operations:
 - 1.1 adhere to procedures for compliance with risk assessment, COSHH, use of personal protective equipment and other relevant safety regulations
 - 1.2 ensure the safe isolation of laboratory equipment (such as electrical and fluids supply)
 - 1.3 follow manufacturers' instructions, drawings and procedures for routine maintenance
 - 1.4 check that the scientific or technical tools and equipment used are in a safe and usable condition
 - 1.5 ensure that the equipment is kept free from foreign objects, dirt or other contamination
 - 1.6 carry out auditory and visual checks on the operation of scientific or technical equipment
 - 1.7 confirm that the scientific or technical equipment is operating correctly and is ready for use
 - 1.8 return all tools, equipment and waste to the correct locations on completion of the maintenance activities
 - 1.9 ensure that accurate, complete and legible records are kept of the maintenance activities
2. Carry out maintenance and cleaning on two of the following scientific or technical categories:
 - 2.1 biological equipment and/or instruments
 - 2.2 chemical equipment and/or instruments
 - 2.3 electronic equipment and/or instruments
 - 2.4 weighing and measuring equipment and/or instruments
 - 2.5 information technology equipment
 - 2.6 engineering machines, equipment and/or instruments
 - 2.7 other technical equipment or instruments
3. Record and communicate details of work done, to the appropriate people, using:
 - 3.1 verbal report

Plus one method from the following:

 - 3.2 written or typed report
 - 3.3 computer-based record
 - 3.4 specific workplace documentation

3.5 electronic mail ***Knowledge and Understanding***

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities

- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve

- K8. The manufacturers' specifications and recommendations for the maintenance and calibration of the scientific or technical equipment
- K9. The methods used for visually checking, and cleaning, of scientific or technical equipment
- K10. The different types, condition and quantities of consumables required for the range of scientific or technical equipment maintained
- K11. The methods for maintaining personal health and safety during the maintenance of equipment
- K12. How to check that the scientific or technical equipment is working correctly and in accordance with the manufacturer's specifications
- K13. The common types of equipment fault, and how these must be dealt with
- K14. The department or person to whom equipment faults should be reported
- K15. The methods used for keeping records of the maintenance, cleaning and calibration of scientific or technical equipment, and why this is important
- K16. The procedures for disposal of any waste produced or of any equipment beyond repair

Assessor Comments/Feedback

UNIT LATA 2-08 PREPARE RESOURCES AND EQUIPMENT FOR SCIENTIFIC OR TECHNICAL LEARNING ACTIVITIES (Level 5, 4 Credits)

Unit Overview

This unit covers the competence you will need to prepare resources and equipment for scientific or technical learning activities in accordance with approved procedures and practices. You will be required to demonstrate that you can obtain the required information for the scientific or technical learning activities to be undertaken, ensuring all the required resources are available for the learning activities to be completed. You will ensure there are sufficient resources for the learning activities and they meet the requirements of the learners in accordance with workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Confirm that the workplace has been cleared of previous activities and that services are working effectively
- P4. Obtain information about the scientific or technical learning activities to be carried out
- P5. Obtain information about the resources and identify what is required for learning activities
- P6. Obtain and allocate sufficient resources for the learning activities
- P7. Distribute resources within the workplace according to the learners' requirements
- P8. Ensure that all resources are used in cost effective manner
- P9. Identify accurately any hazards or risks associated with the preparation of resources and take the appropriate action

P10. Work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines

P11. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Prepare and equip for one of the following learning activities:

- 1.1 timetabled lessons
- 1.2 other supervised events
- 1.3 outside activities

2. Check hazards or potential risks in six of the following categories:

- 2.1 equipment
- 2.2 services (e.g. gas)
- 2.3 procedures
- 2.4 workplace
- 2.5 techniques used
- 2.6 atmosphere
- 2.7 students/learners
- 2.8 materials/consumables

3. Record details of work activities, and communicate the details to the appropriate people, using:

- 3.1 verbal report

Plus one method from the following:

- 3.2 written or typed report
- 3.3 computer-based record
- 3.4 specific workplace documentation
- 3.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace.
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve

- K8. What are the basic techniques and scientific or technical knowledge required to help prepare resources and equipment for student/learner learning activities
- K9. How to locate other sources from which further scientific or technical knowledge can be obtained
- K10. What learning activities can be prepared for
- K11. What hazards are associated with the learning activities
- K12. What is the appropriate action to take with hazards
- K13. How to identify appropriate scientific or technical resources, consumables and equipment for learning activities
- K14. How to prepare the appropriate scientific or technical resources, consumables and equipment for learning activities
- K15. How to identify defective scientific or technical resources, consumables or equipment and the appropriate action to take
- K16. How to check that services are working effectively and safely and what action to take if they are not
- K17. How to allocate resources cost effectively
- K18. How to confirm that the workplace is fit to use
- K19. When and how to use risk assessments

Assessor Comments/Feedback

UNIT LATA 2-09 CLEAN AND TIDY THE WORKPLACE AFTER SCIENTIFIC OR TECHNICAL LEARNING ACTIVITIES (Level 5, 3 Credits)

Unit Overview

This unit covers the competence you will need to clean and tidy the workplace after scientific or technical learning activities in accordance with approved procedures and practices. You will be required to demonstrate that you can work to the relevant workplace procedures, legislation and organisational policy, to use good scientific, technical techniques and practices in accordance with workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Identify any workplace hazards associated with any materials, resources, consumables and equipment to be cleared
- P4. Take appropriate action against identified hazards and clean up any spillages safely
- P5. Ensure that all resources and equipment are cleaned and replenished as necessary before returning to their correct location for storage
- P6. Dispose of waste safely and in accordance with workplace procedures
- P7. Confirm that the workplace is in a fit condition for further learning activities to relevant people
- P8. Work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
- P9. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Check hazards and potential risks in all of the following categories:

- 1.1 equipment
 - 1.2 services e.g. gas, electricity
 - 1.3 workplace environment
 - 1.4 procedures
 - 1.5 people
 - 1.6 materials or consumable
2. Clean and tidy after one of the following learning activities:
- 2.1 timetabled lessons
 - 2.2 other supervised events
 - 2.3 outside activities
3. Confirm workplace is fit for use with relevant people to include one of the following:
- 3.1 supervisor
 - 3.2 team leader
 - 3.3 health and safety officer
 - 3.4 manager
 - 3.5 head of department
 - 3.6 teacher or trainer
4. Record details of work activities, and communicate the details to the appropriate people, using:
- 4.1 verbal report
- Plus one method from the following:
- 4.2 written or typed report
 - 4.3 computer-based record
 - 4.4 specific workplace documentation
 - 4.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace.
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K8. What hazards or risks associated with cleaning and tidying after scientific or technical learning activities
- K9. What is the appropriate action to take with hazards

K10. How to deal with spillages and what action to take

K11. How to check that services are working effectively and safely and what action to take if they are not

K12. How to store scientific or technical materials, resources, consumables and equipment safely and correctly

K13. What are the procedures for the safe storage and handling of scientific or technical materials, resources, consumables and equipment

K14. When and how to use risk assessment while cleaning and tidying the workplace

K15. The techniques and processes used for cleaning and tidying the workplace

K16. How to confirm when the workplace is fit to use

Assessor Comments/Feedback

UNIT LATA 2-10 PROVIDE SUPPORT FOR SCIENTIFIC OR TECHNICAL LEARNING ACTIVITIES (Level 7, 7 Credits)

Unit Overview

This unit covers the competence you will need to provide support for scientific or technical learning activities in accordance with approved procedures and practices. You will be required to demonstrate that you can assist teachers or trainers with scientific or technical learning activities in accordance with workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Adopt appropriate working practices when supporting student activities and performance
- P4. Support teachers or trainers and follow their instructions when monitoring the learner activities
- P5. Instruct the student/learners correctly and clearly on best working practices
- P6. Encourage the students/learners to adopt best working practices when carrying out learning activities
- P7. Monitor the student/learner activities and adhere to procedures and health and safety requirements
- P8. Take the appropriate action to address problems encountered before, during and after learning activities
- P9. Work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
- P10. Report problems or concerns from the learning activities to the relevant people
- P11. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Follow instructions from one of the following supervisors:
 - 1.1 supervisor
 - 1.2 team leader
 - 1.3 health and safety officer
 - 1.4 manager
 - 1.5 head of department
 - 1.6 teacher or trainer

2. Provide scientific or technical support with all of the following activities:
 - 2.1 timetabled lessons
 - 2.2 other supervised events
 - 2.3 outside activities

3. Provide scientific or technical support with all of the following elements:
 - 3.1 equipment
 - 3.2 materials
 - 3.3 techniques
 - 3.4 services (e.g. gas, electricity)
 - 3.5 procedures
 - 3.6 consumables

4. Record and communicate details of work done, to the appropriate people, using:
 - 4.1 verbal report

Plus one method from the following:

 - 4.2 written or type report
 - 4.3 computer-based record
 - 4.4 specific workplace document
 - 4.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve

- K8. What are the basic techniques and knowledge required to help with student/learner learning activities
- K9. How to promote best scientific or technical working practices amongst student/learners
- K10. How to encourage learners to ask questions
- K11. What scientific or technical hazards risks are associated with the learning activities
- K12. What scientific or technical risks as associated with your own and the learners' activities
- K13. What is the appropriate action to take with hazards
- K14. How to deal with spillages, equipment failures and breakages
- K15. How to identify problems with learners and the student/learner learning activities
- K16. What are appropriate actions to take in the event of problems before, during and after learning activities
- K17. When and how to use remedial, supportive and/or prohibitive actions

Assessor Comments/Feedback

UNIT LATA 2-06 PREPARE COMPOUNDS AND SOLUTIONS FOR SCIENTIFIC OR TECHNICAL USE (Level 7, 15 Credits)

Unit Overview

This unit covers the competences you need to prepare compounds and solutions for scientific or technical use in accordance with approved procedures and practices. You will be required to demonstrate that you can measure, weigh and prepare compounds and solutions for scientific or technical use in accordance with workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Use balances for accurately weighing out materials
- P4. Measure out required concentrations of liquids for scientific or technical use
- P5. Measure specific volumes of liquids and weights of solids for scientific or technical use
- P6. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Use two of the following types of protective clothing and equipment:
 - 1.1 laboratory coat/apron/overall
 - 1.2 gloves
 - 1.3 full face visor or shield
 - 1.4 dust mask/respirator
 - 1.5 safety glasses or goggles
 - 1.6 fume cupboard

2. Carry out weighing activities using balances (scales), using two of the following accuracies:
 - 2.1 grams
 - 2.2 milligrams
 - 2.3 micrograms

3. Measure out solutions, using two of the following:
 - 3.1 automated pipettes
 - 3.2 burettes
 - 3.3 graduated/bulb pipettes
 - 3.4 volumetric flasks
 - 3.5 syringes
 - 3.6 other (please specify)
 - 3.7 graduated cylinders/beakers/tubes

4. Calculate the concentrations of solutions, the amounts and volumes required, using two of the following:
 - 4.1 moles per litre
 - 4.2 parts per million
 - 4.3 other (please specify)
 - 4.4 grams per litre
 - 4.5 mass percent

5. Make up known volumes of solutions to a specified concentration, using both of the following:
 - 5.1 by measuring and dissolving the correct amount of solid in the correct volume of diluent/solvent
 - 5.2 by dilution from a concentrated stock solution

6. Weigh and prepare three of the following types of compound or solution:
 - 6.1 solids that do not readily lose or gain weight (moisture or solvent)
 - 6.2 solids that readily lose or gain weight (moisture or solvent)
 - 6.3 solutions (by dilution from a known concentration)
 - 6.4 solutions (at actual molecular weight)

7. Record details of the work, and communicate the details to the appropriate people, using:
 - 7.1 verbal report

Plus one method from the following:

 - 7.2 written or typed report (eg, laboratory notebook)
 - 7.3 computer-based record
 - 7.4 specific workplace documentation
 - 7.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace.

- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K8. How to calculate mass/mole calculations
- K9. How to convert between metric and imperial measures and vice versa
- K10. How to select the appropriate balance and scale for less than 100mg, 100mg to 5g, and 5g and above
- K11. How to check that your equipment is clean, dry, free of chips and ready for use
- K12. How to measure and weigh solids and liquids for scientific or technical use
- K13. How to convert between different units of concentration
- K14. How to calculate dilution factors and dilution volumes to make solutions from concentrated stock solutions
- K15. How to choose the appropriate measuring equipment for the scale, accuracy and precision required for the task
- K16. How to clean and maintain weighing and measuring equipment

Assessor Comments/Feedback

UNIT LS 2-05 MAINTAIN STOCKS OF RESOURCES, EQUIPMENT AND CONSUMABLES IN LIFE SCIENCES AND RELATED INDUSTRIES (Level 6, 4 Credits)

Unit Overview

This unit covers the skills you need to assist with the maintenance and control of stocks of resources, equipment and consumables for scientific or similar uses, in accordance with approved procedures, organisational policy and practices. You will complete tasks and procedures, exercise autonomy and judgement subject to overall direction or guidance. You will report any problems with the activities, materials or equipment that you cannot personally resolve. You will work under a team leader whilst taking responsibility for the quality and accuracy of the work that you carry out.

Maintaining stocks at the right level, within critical limits and in the right environment is important for the smooth running of the workplace. Stock levels should be accurately labelled, recorded, handled, transported, stored and disposed of according to workplace procedures. Failure to do so will result in incorrect stock levels, incorrect labelling and contribute to inefficiency and wastage. Your underpinning knowledge will provide a good understanding of scientific or similar facts, procedures, workplace processes and ideas to complete well-defined generally routine tasks and address straightforward problems in the workplace.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.
- This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures, health and safety, environmental and other relevant regulations and guidelines
- P2. Count stocks, confirm that they are within the maximum/minimum levels required for the scientific and related activities and update records in the information system
- P3. Check the packaging information on individual stock items, and confirm that critical details are within acceptable limits
- P4. Identify, record and communicate requirements to replenish stocks at specified re-order levels
- P5. Check new stocks received against purchase orders and delivery notes and notify relevant people of any discrepancies or breakages
- P6. Label and store items in the correct environment and location and update records in the information system

- P7. Correctly handle and transport stock items, using the appropriate methods and techniques
- P8. Dispose, in the appropriate manner and locations, of stock or items that are damaged or outside acceptable limits for scientific and related uses
- P9. Communicate the required information about the work done to authorised people

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Check stock levels for **three** of the following:
 - 1.1 biological specimens and materials
 - 1.2 electrical/electronic components/subassemblies
 - 1.3 scientific chemicals
 - 1.4 analysers, equipment or instruments
 - 1.5 scientific or technical consumables
 - 1.6 other (please specify)
2. Check packaging for **five** of the following information:
 - 2.1 batch numbers
 - 2.2 expiry dates
 - 2.3 quantities
 - 2.4 safety data sheets
 - 2.5 delivery dates
 - 2.6 hazard labels
 - 2.7 volumes
 - 2.8 weights
 - 2.9 condition received
3. Handle and transport **both** of the following types of material:
 - 3.1 scientific or technical chemicals
 - 3.2 scientific or technical equipment
4. Check stock items held in **four** of the following storage environments:
 - 4.1 ambient temperature locations
 - 4.2 refrigerators/freezers
 - 4.3 zero or low light locations
 - 4.4 hazardous chemical locations
 - 4.5 equipment locations
 - 4.6 consumable item locations
5. Access and update information on the information system for **all** of the following:
 - 5.1 booking items out from stock
 - 5.2 booking items into stock
 - 5.3 stock check levels
 - 5.4 stock usage
6. Record details of the stock control, and communicate the details to the appropriate people, using:
 - 6.1 verbal report

Plus one method from the following:

- 6.2 written or typed report
- 6.3 specific workplace documentation
- 6.4 computer-based record
- 6.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety and other legislative requirements of the area in which you are carrying out the scientific or similar activities
- K2. The scientific or similar techniques and processes you must use correctly in the workplace
- K3. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K4. The importance of correct identification, and any unique workplace coding system
- K5. Why it is important to maintain accurate records for scientific or similar resources, equipment and consumables
- K6. The types and range of scientific or similar resources, equipment and consumables used in the workplace, and how they have to be checked
- K7. How to check the packaging information on stock (such as batch numbers and expiry dates), labelling new stock items correctly and recording in the information system
- K8. The range of storage environments used to store scientific or similar resources, equipment and consumables for workplace use
- K9. How to monitor and control stock levels for scientific or similar uses
- K10. How to dispose of waste or damaged stock items, in accordance with workplace procedures
- K11. How to resolve issues with delivered damaged or incomplete replacement stock

Assessor Comments/Feedback

UNIT LATA 2-11 PREPARE NEW SCIENTIFIC OR TECHNICAL METHODS, RESOURCES AND EQUIPMENT FOR LEARNING ACTIVITIES (Level 7, 10 Credits)

Unit Overview

This unit covers the competences you need to prepare new scientific or technical methods, resources and equipment for learning activities in accordance with approved procedures and practices. You will be required to demonstrate that you can assist with the development and preparation of new scientific or technical methods, resources and equipment for use in new or modified learning activities in accordance with workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.

This unit is subject to the requirements of the Assessment Strategy outlined in this handbook

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Use safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Clarify the requirements of the new method, resources or equipment to be used with relevant people
- P4. Confirm that the new or modified method is appropriate and cost effective for the learning activity
- P5. Identify the resources and/or equipment required for the new or modified learning activity method
- P6. Assess and give advice on the hazards and risks associated with the preparation of the new or modified method
- P7. Test the procedure for the new or modified methods and record the results
- P8. Evaluate and modify the new or modified method in partnership with the relevant people
- P9. Work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
- P10. Communicate the required information about the work done, in accordance with departmental and organisational procedure

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Clarify the new or modified method with one of the following people:
 - 1.1 supervisor
 - 1.2 team leader
 - 1.3 health and safety officer
 - 1.4 manager
 - 1.5 head of department
 - 1.6 teacher or trainer

2. Identify the requirements needed for one of the following new or modified learning activities:
 - 2.1 timetabled lessons
 - 2.2 other supervised events
 - 2.3 outside activities

3. Evaluate all of the following for the new or modified learning activities with relevant people:
 - 3.1 equipment
 - 3.2 costs
 - 3.3 techniques
 - 3.4 services (e.g. gas, electricity)
 - 3.5 materials
 - 3.6 hazards and risks
 - 3.7 time required
 - 3.8 procedures
 - 3.9 learning outcomes

4. Assess and give advice on three of the following hazards and risks:
 - 4.1 harmful/toxic material
 - 4.2 oxidising material
 - 4.3 biohazard material
 - 4.4 sensitising/irritant material
 - 4.5 extreme temperature item
 - 4.6 electrostatic discharge item
 - 4.7 high voltage item
 - 4.8 radioactive material
 - 4.9 manual handling
 - 4.10 highly flammable material
 - 4.11 corrosive material

5. Record and communicate details of work done, to the appropriate people, using:
 - 5.1 verbal report

Plus one method from the following:

 - 5.2 written or typed report
 - 5.3 computer-based record
 - 5.4 specific workplace documentation
 - 5.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace.
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
- K5. The importance of correct identification, and any unique workplace coding system
- K6. The lines of communication and responsibilities in your department, and their links with the rest of the organisation
- K7. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K8. What are the basic techniques and scientific or technical knowledge required to prepare and test new or modified methods
- K9. What types of scientific or technical methods can be prepared and tested
- K10. What scientific or technical resources are required and available
- K11. What learning activity constraints are in force
- K12. What constitutes a scientific or technical hazard
- K13. When and how to undertake a risk assessment
- K14. How to test the new or modified scientific or technical method
- K15. How to organise your work according to workplace deadlines
- K16. How to record and evaluate the results of the new or modified scientific or technical method
- K17. How to modify the scientific or technical method, and when this may be required
- K18. What documentation should be used for new or modified learning activities

Assessor Comments/Feedback

UNIT LATA 2-07 DEMONSTRATE SCIENTIFIC OR TECHNICAL METHODS, TECHNIQUES AND SKILLS TO OTHERS IN THE WORKPLACE (Level 7, 8 Credits)

Unit Overview

This unit covers the competences you need to demonstrate scientific or technical methods, techniques and skills to others in the workplace in accordance with approved procedures and practices. You will be required to prepare and demonstrate scientific or technical methods, techniques and skills in a manner appropriate to learner/student's needs in accordance with the relevant workplace procedures. The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

Assessment Guidance and Evidence Requirements

Evidence Requirements

Competent performance must be demonstrated consistently and supported by evidence from a variety of sources. In order to demonstrate this, a minimum of three different examples of performance must be provided, and must be sufficient to show that the performance requirements of the unit have been carried out to the prescribed standards over a period of time.

Assessment Guidance

- Evidence for this unit must be obtained from the working environment.

This unit is subject to the requirements of the Assessment Strategy outlined in this handbook.

Performance Criteria

You must be able to:

- P1. Ensure that your work is carried out in accordance with workplace procedures
- P2. Safe practices and the appropriate personal protection equipment (PPE) when doing scientific or technical activities
- P3. Agree the learning/training objectives of the demonstration with the relevant people
- P4. Gather relevant and accurate information for the demonstration
- P5. Prepare the content of the demonstration to meet the learning needs of learner/students
- P6. Confirm that the location for the demonstration allows for optimum visibility and conforms to health and safety requirements and regulations and guidelines
- P7. Prepare answers to anticipated questions
- P8. Demonstrate scientific or technical methods, techniques and skills in a manner appropriate to learner/student's needs
- P9. Work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
- P10. Communicate the required information about the work done, in accordance with departmental and organisational procedures

Scope of the unit

The scope items specified (below) indicate the minimum requirements for this unit. You must

1. Agree the requirements for the demonstration with one of the following people:

- 1.1 supervisor
- 1.2 team leader
- 1.3 health and safety officer
- 1.4 manager
- 1.5 head of department
- 1.6 teacher or trainer

2. Establish both of the following for the demonstration:

- 2.1 scientific or technical methods and skills
- 2.2 health and safety precautions

Plus six of the following:

- 2.3 place for the demonstration
- 2.4 start and finish time for the demonstration
- 2.5 the number of learners/students
- 2.6 equipment required
- 2.7 services required (e.g. gas, electricity)
- 2.8 materials required
- 2.9 workplace procedures to be used
- 2.10 consumables required

3. Demonstrate methods and skills in one of the following locations:

- 3.1 timetabled lessons
- 3.2 other supervised events
- 3.3 outside activities

4. Record and communicate the details of the work done, to the appropriate people, using:

- 4.1 verbal report

Plus one method from the following:

- 4.2 written or typed report
- 4.3 computer-based record
- 4.4 specific workplace documentation
- 4.5 electronic mail

Knowledge and Understanding

You need to know and understand:

- K1. The health and safety requirements of the area in which you are carrying out the scientific or technical activities
- K2. The implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
- K3. The scientific or technical techniques and processes you must use correctly in the workplace.
- K4. The importance of wearing protective clothing, gloves and eye protection for scientific or technical activities

- K5. The importance of correct identification, and any unique workplace coding system
- K6. The organisational requirements for maintaining the security of the workplace
- K7. The lines of communication and responsibilities in your department, and the links with the rest of the organisation
- K8. The limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K9. What are the approved scientific or technical working practices and why it is important to follow them at all times
- K10. What workplace procedures apply and why it is important to follow them at all times
- K11. What are the basic techniques and skills required to help prepare for scientific or technical demonstrations
- K12. How to select the materials and equipment for the demonstration activity
- K13. How to prepare resources for demonstration activity
- K14. How to demonstrate the scientific or technical methods, techniques skills to others in the workplace
- K15. How to promote best working practice amongst learners/students
- K16. How to monitor learner/student's learning activities
- K17. How to encourage learners/students to ask questions
- K18. What learning activities can be prepared by learners/students, and how to help them to prepare for the demonstration activities
- K19. What hazards are associated with the demonstration activities
- K20. The range of scientific or technical methods and skills that can be demonstrated
- K21. How to deal with spillages and what action to take
- K22. What are the procedures for the safe storage and handling of materials and equipment
- K23. How to identify problems that might occur in the demonstration
- K24. What are appropriate actions to take in the event of problems
- K25. When and how to use remedial, supportive and / or prohibitive actions
- K26. The reasons why effective communication is important, and the methods used for communicating effectively

Assessor Comments/Feedback

NOTES



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