

Level 2
Edexcel NVQ
Clinical Laboratory Support
January 2003

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Section 1: General information about NVQs

Introduction

This section provides an overview of NVQs. If you are already familiar with the concept of NVQs, you may wish to go straight to section 2.

What are NVQs?

National Vocational Qualifications (NVQs) are work-based qualifications that assess the skills and knowledge people need to perform their job role effectively. The qualifications are based on national occupational standards, which define what employees, or potential employees, must be able to do and know, how well they must do these things, and the circumstances in which they have to use the skills or carry out the activities.

The standards are usually defined by national training organisations (NTOs), which are made up of representatives from the relevant industrial sector.

The organisation responsible for the standards in Clinical Laboratory Support NVQ is:

Science, Technology and Mathematics Council
22 Old Queen Street
London
SW1H 9HP

Telephone 020 7225 1155
Fax: 020 7225 1997
Website: www.stmc.org.uk

Each NVQ is designed to fit into a broad qualifications framework, which allows for the comparison of different qualifications in the UK and throughout Europe.

NVQs are open to all. There are no entry requirements, no prescribed methods of delivery, no time constraints for completion and no age limits. Candidates do not have to achieve their NVQ all at once, unit accreditation is available for those wishing to achieve an NVQ unit by unit over a period of time.

On occasions, special assessment arrangements may be needed in order to provide equal opportunities to candidates with special needs. Further information on special assessment arrangements can be found in section 5.

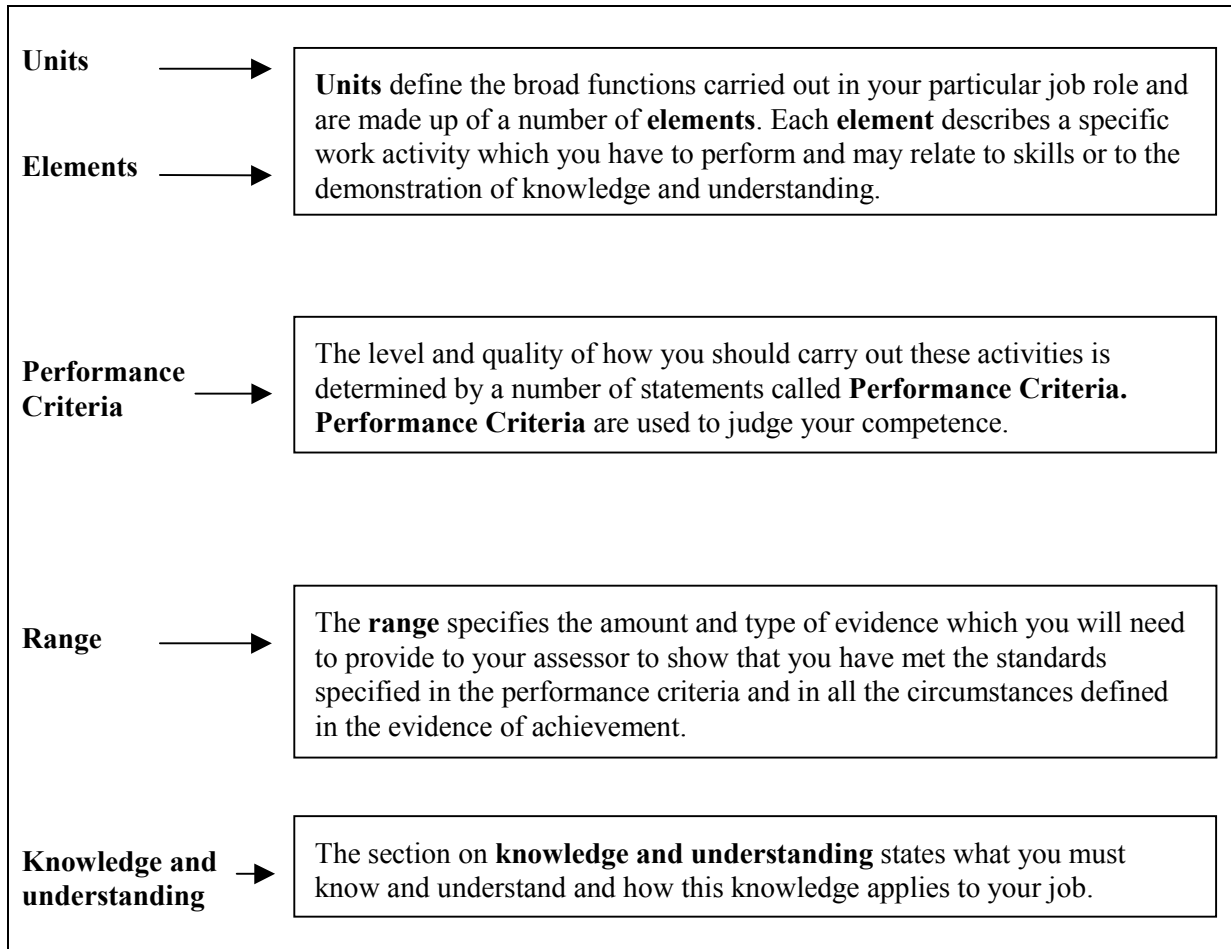
NVQs are available at five levels, which reflect the range of technical and supervisory skills, knowledge, and experience that employees should have as they progress in their industry. An explanation of the levels is provided on the following page.

Explanation of levels

Level	Candidates must show their competence:
Level 1	in a range of activities that are largely routine and predictable.
Level 2	in a broader range of work activities that are less routine and predictable. Their job role will need to have some autonomy and responsibility and may require them to work as part of a team.
Level 3	by applying their knowledge and skills while carrying out a broad range of varied work activities, most of which are complex and non-routine. Their job role will have considerable autonomy or responsibility, and often require them to manage others.
Level 4	through complex work activities that require technical knowledge. Their job role requires substantial personal autonomy and often requires them to take responsibility for the work of others and for allocating resources.
Level 5	when carrying out activities in a wide range of situations, which are often unpredictable. Substantial responsibility and autonomy is involved in the job role, which requires deciding on the allocation of resources and the work of others. It requires the use of complex skills such as analysis, design and evaluation.

What is the structure of an NVQ?

All NVQs have a common structure. They consist of standards that can be broken down into the following parts:



If you are not yet clear about how we define standards, remember that the standards have been developed by experts with experience in management and that all candidates aiming for this particular NVQ are being assessed against the same standards.

You will find an example of an NVQ unit overleaf.

An example of an NVQ unit in Clinical Laboratory Support at Level 2

Evidence achievement record

Unit title
The title describes a role or task.

Unit 1 **Maintain health and safety in the clinical laboratory environment**

Element 1.1 **Monitor and maintain health, safety and security in a clinical laboratory**

Element
Each unit is made up of a number of elements. Each element describes a specific work activity that employees have to perform and the skills, knowledge or understanding required.

Performance criteria

You must ensure that:

- a your work is carried out in accordance with standard operating procedures
- b you accurately assess health and safety in relation to your work and the laboratory
- c any **health and safety concerns** are made as safe as possible, and reported accurately to the appropriate person without delay
- d you maintain the security of the laboratory in accordance with organisational requirements
- e you maintain your work area to a standard of health and safety which is consistent with local policies and legal requirements
- f you maintain and use equipment and materials in accordance with safety instructions
- g you dispose of any **hazardous materials, waste and waste containers** safely and correctly
- h you prepare, use and dispose of disinfectants safely and correctly
- i you carry out decontamination of work surfaces and floors effectively
- j you take the appropriate precautions to protect yourself and others during working
- k you take the correct action without delay if an **emergency** is suspected
- l your records are accurate, legible and complete

Performance criteria
This sets out what candidates must do to show they can perform the work task competently. Assessors judge candidates' performance against these standards. All of the performance criteria need to be met.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Evidence achievement record

Unit 1 **Maintain health and safety in the clinical laboratory environment**

Element 1.1 **Monitor and maintain health, safety and security in a clinical laboratory**

Range	Assessor to insert date each time competence is achieved				
Health and safety concerns:					
1 laboratory hazards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 unsafe practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 spillages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous materials:					
1 flammables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 corrosive chemicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 toxic chemicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 biological	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergencies:					
1 fire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 spillage of hazardous substances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 gas escapes and others as described in local procedures manuals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Knowledge evidence record

Unit 1 **Maintain health and safety in the clinical laboratory environment**

Element 1.1 **Monitor and maintain health, safety and security in a clinical laboratory**

Evidence key:					
EI	Evidence Index No.	O	Observation	P	Personal Statement
WT	Witness Testimony	S	Simulation	APL	Accreditation of Prior Learning
Q&A	Questions and Answers				

Knowledge and understanding
This states what candidates must know and understand, and how this knowledge applies to their jobs.

Knowledge, understanding and skills for this unit:

You must know and understand:	Type of evidence						
	EI	O	P	WT	S	APL	Q&A
Legislation and policy							
1 your responsibility and that of your employer for maintaining health and safety under relevant legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 the requirements of standard operating procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health and safety in the laboratory							
3 why risks should be assessed and the correct action to be taken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 to whom risks should be reported	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 how to prevent infection in clinical laboratories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 the identity of health and safety representatives such as the laboratory safety officer, staff health and safety representatives and first aiders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 the location and correct use of emergency equipment such as fire extinguishers (including the situations in which different types of fire extinguishers are used)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: You will be given advice on how much of evidence of achievement you need to prove through performance evidence. The remaining parts of the evidence of achievement may be covered through questioning by your assessor.

Who is involved in NVQs?

A number of individuals and organisations are involved in NVQ assessment. Their roles have been designed to guarantee fair, accurate and consistent assessment.

	Who are they?	What is their role?
Centres	<ul style="list-style-type: none"> Organisations that offer NVQs on behalf of Edexcel. They may be a school, college, university, training provider or employer. 	<ul style="list-style-type: none"> Responsible for the quality of the qualification. They must work within Edexcel's policies and guidelines, one of which is to provide a realistic working environment (RWE). Centres appoint assessors and internal verifiers. Once a year, centres must review the operation of the course and candidates' performance (see 'Review and evaluation' in section 5).
Candidates	<ul style="list-style-type: none"> The people who want to achieve the NVQ, eg an employee. 	<ul style="list-style-type: none"> Need to show they can perform to national standards in order to be awarded an NVQ or unit(s).
Assessors	<ul style="list-style-type: none"> The person who assesses the candidates and decides if they have met the required standard, eg a supervisor. 	<ul style="list-style-type: none"> Judge candidate's evidence of performance, knowledge and understanding against the national standards and decide whether candidates have demonstrated competence.
Internal verifiers	<ul style="list-style-type: none"> Individuals appointed by the centre who ensure that assessors apply the standards consistently, eg supervisor's line manager. 	<ul style="list-style-type: none"> Advise and support assessors and maintain the quality of assessment in a centre. They sample assessments systematically to confirm the quality and consistency of assessment decisions.
External verifier	<ul style="list-style-type: none"> Individuals appointed by Edexcel to ensure that standards are being applied uniformly and consistently across all centres offering the NVQ. 	<ul style="list-style-type: none"> Check the quality and consistency of assessments, both within and between centres by systematically sampling evidence. Make regular visits to centres to ensure they continue to meet the approval criteria.
Edexcel	<ul style="list-style-type: none"> Your awarding body, approved by the government to offer qualifications and awards. Edexcel provides qualifications throughout the world and was formed in 1996 by the merger of the Business and Technician Education Council (BTEC) and London Examinations. 	<ul style="list-style-type: none"> Issue candidates' certificates so that employers can be sure the qualification has been gained after a rigorous and effective assessment process.

Assessors, internal verifiers and external verifiers should have occupational expertise in the NVQs they are assessing and verifying. The NTO will normally specify the level of occupational expertise required, within the standards.

Assessors and verifiers are also expected to obtain an appropriate qualification in assessment and verification. This can take the form of the 'D units' (the national standards for assessment and verification) or an alternative qualification that the NTO recognises.

Edexcel expects all assessors, internal verifiers and external verifiers to obtain the appropriate D units or the NTO-recognised qualifications within **18 months** of starting assessing or verifying.

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Section 2: The Level 2 NVQ in Clinical Laboratory Support

The NVQ in Clinical Laboratory Support recognises the skills, knowledge and understanding of candidates and allows them to gain a qualification in the workplace that relates to their job area and promotes good working practice.

The standards on which these NVQs are based have been developed by the Science, Technology and Mathematics Council, the national training organisation for this industrial sector.

The NVQ is designed to be assessed in the workplace, or in conditions resembling the workplace, for example:

- in a college of further education or higher education institution.

In a further education or training situation, assessment is often achieved through simulation. Simulation must be carried out in conditions resembling the workplace. These conditions are described as being a ‘realistic working environment’ (RWE). For guidance on the use of simulation, see page 30 of section 3.

What is the structure of the Level 2 NVQ in Clinical Laboratory Support

To achieve the whole qualification, a candidate must prove competence in **all five mandatory** units and **two optional** units.

Mandatory units for the Level 2 NVQ in Clinical Laboratory Support

Candidates must achieve **all five** of the units listed.

Unit number	Title	Element	Title
Unit 1	Maintain health and safety in the clinical laboratory environment	1.1	Monitor and maintain health, safety and security in a clinical laboratory
		1.2	Maintain good standards of health and safety for self and others
Unit 2	Maintain effective work and working relationships	2.1	Maintain effective work and develop yourself to improve your performance
		2.2	Establish and maintain effective working relationships with others
Unit 3	Maintain laboratory information and communications	3.1	Obtain and supply information
		3.2	Record laboratory information
		3.3	Maintain communications
Unit 4	Receive, sort, store and transport specimens	4.1	Receive specimens
		4.2	Handle, sort, store and transport specimens
Unit 5	Assist with the preparation of specimens	5.1	Make the work area and equipment ready for specimen preparation
		5.2	Carry out routine specimen preparation

Continued overleaf...

Optional units for the Level 2 NVQ in Clinical Laboratory Support

Candidates must achieve **two** of the units listed.

Unit number	Title	Element	Title
Unit 6	Store, maintain and supply working stocks of reagents and consumables	6.1	Receive and store stocks of reagents and consumables
		6.2	Maintain and supply stocks of reagents and consumables
Unit 7	Prepare solutions for use in the laboratory	7.1	Measure mass and volume of materials
		7.2	Prepare solutions
Unit 8	Assist with the routine maintenance and use of clinical laboratory equipment	8.1	Carry out the routine maintenance of clinical laboratory equipment
		8.2	Prepare, monitor and use clinical laboratory equipment
Unit 9	Perform manual laboratory techniques	9.1	Prepare for manual laboratory techniques
		9.2	Carry out manual laboratory techniques
Unit 10	Assist with the processing of specimens using automated laboratory techniques	10.1	Perform start up and shut down procedures
		10.2	Maintain sample throughput
Customer Service Unit 1	Give customers a positive impression of yourself and your organisation	1.1	Establish effective relationships with customers
		1.2	Respond appropriately to customers
		1.3	Communicate information to customers

What are the evidence requirements for the level 2 Clinical Laboratory Support?

Unit 1 Maintain health and safety in the clinical laboratory environment		
Element	Title	Evidence requirements and assessment guidance
1.1	Monitor and maintain health, safety and security in a clinical laboratory	<p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all of the health and safety concerns 2 two of the four hazardous materials 3 all of the emergencies 4 five types of waste 5 all types of waste containers. <p>Where it is not possible to gain performance evidence for all of the above aspects of health and safety, simulations and questioning may be used. However, simulations must reflect the requirements of the real working environment.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>Taking the correct action in PC (j) and (k) may involve raising the alarm or following emergency procedures when the alarm has been raised. Hazards may be physical, chemical, biological or mechanical. Spillages may involve chemicals or biological fluids.</p> <p>Disinfectants may include hypochlorites and others as described in local procedures manuals.</p>

Continued overleaf

Element	Title	Evidence requirements and assessment guidance
1.2	Maintain good standards of health and safety for self and others	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all types of protective clothing and equipment 2 two of the appropriate actions from the range 3 both types of incidents. <p>Where it is not possible to gain performance evidence for all of the above aspects of health and safety, simulations and questioning may be used. However simulations must reflect the requirements of the real working environment.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>‘Adverse changes’ in an individual’s health status may include severe loss of breath, cardiac arrest, faints or loss of consciousness, for example.</p>

Continued overleaf

Unit 2 Maintain effective work and working relationships		
Element	Title	Evidence requirements and assessment guidance
2.1	Maintain effective work and develop yourself to improve your performance	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for all types of performance.</p> <p>Simulations should only be used for this element where opportunities to generate performance evidence are rare or may compromise safety procedures.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>‘Productivity’ may be in relation to completing specific tasks within a given time period. PC (c) requires that personal performance is reviewed at suitable intervals. This review may be as part of the assessment process for an NVQ/SVQ.</p>
2.2	Establish and maintain effective working relationships with others	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for effective working relationships with colleagues, supervisors and managers, and persons external to the department.</p> <p>Simulations should not be used for this element.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>PC (c) relates to authorised changes that are made by others or yourself within the workplace in order to improve working practices. These may be initiatives to improve quality, technology or internal communications for example. You are expected to contribute to these developments through discussion with the appropriate person.</p>

Continued overleaf

Unit 3 Maintain laboratory information and communications		
Element	Title	Evidence requirements and assessment guidance
3.1	Obtain and supply information	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for accessing all the sources of information in the range.</p> <p>Simulations should only be used for this element where opportunities to generate performance evidence are rare or may compromise confidentiality policies and procedures.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>
3.2	Record laboratory information	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all types of systems 2 all types of information. <p>Simulations should only be used for this element where opportunities to generate performance evidence are rare or may compromise confidentiality policies and procedures.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>
3.3	Maintain communications	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all types of messages 2 all types of information. <p>Simulations should only be used for this element where opportunities to generate performance evidence are rare or may compromise confidentiality policies and procedures.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>Visitors may include laboratory personnel, non-laboratory personnel, non-hospital personnel.</p> <p>Oral messages may be either those taken on the telephone or through face to face contact with an individual.</p>

Continued overleaf

Unit 4 Receive, sort, store and transport specimens		
Element	Title	Evidence requirements and assessment guidance
4.1	Receive specimens	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 three different types of specimens 2 all types of containers 3 responding to specimens which are unsuitable from across the range. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>‘Appropriate action’ means complying with SOPs.</p> <p>‘Specimens’ may include a variety of blood samples, blood components, biological and non-biological materials.</p>
4.2	Handle, sort, store and transport specimens	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 three different types of specimens 2 all types of recording systems. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>‘Specimens’ may include a variety of blood samples, blood components, biological and non-biological materials.</p>

Continued overleaf

Unit 5 Assist with the preparation of specimens		
Element	Title	Evidence requirements and assessment guidance
5.1	Make the work area and equipment ready for specimen preparation	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all types of work areas 2 all types of equipment. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>The candidate will need to provide evidence for working with a variety of specimens used within the laboratory and department setting such as blood samples, blood components, biological and non-biological materials.</p>
5.2	Carry out routine specimen preparation	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all types of preparation 2 both types of environment. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>The candidate will need to provide evidence for working with a variety of specimens used within the laboratory and department setting such as blood samples, blood components, biological and non-biological materials.</p>

Continued overleaf

Unit 6 Store, maintain and supply working stocks of reagents and consumables		
Element	Title	Evidence requirements and assessment guidance
6.1	Receive and store stocks of reagents and consumables	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all of the stocks in the range statement 2 all of the information 3 all types of storage conditions. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>PC (b) may cover receiving, unpacking and breaking down bulk items.</p>
6.2	Maintain and supply stocks of reagents and consumables	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for all of the stocks in the range.</p> <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>

Continued overleaf

Unit 7 Prepare solutions for use in the laboratory		
Element	Title	Evidence requirements and assessment guidance
7.1	Measure mass and volume of materials	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 using all types of equipment 2 working in all types of work area 3 measuring the volume and mass of all types of materials. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>Weighing equipment includes consumables, spatulas, balances. Volumetric equipment includes pipettes (automated and manual), dispensers, flasks, beakers. Containment equipment could include trays, cabinets, extractor hoods, sinks.</p>
7.2	Prepare solutions	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 all types of constituents 2 five of the six types of equipment 3 all records. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>

Continued overleaf

Unit 8 Assist with the routine maintenance and use of clinical laboratory equipment		
Element	Title	Evidence requirements and assessment guidance
8.1	Carry out the routine maintenance of clinical laboratory equipment	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 four types of equipment from the range 2 all types of maintenance. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>Weighing/measuring equipment includes pipettes (automated and manual) and balances.</p> <p>Temperature controlled apparatus may include laboratory storage rooms, temperature controlled rooms and incubators, ovens, autoclaves.</p> <p>Centrifuges may be floor standing, bench top and refrigerated.</p>
8.2	Prepare, monitor and use clinical laboratory equipment	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 four types of clinical laboratory equipment from the range 2 all types of alarms. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p> <p>Assessment guidance</p> <p>Weighing/measuring equipment includes pipettes (automated and manual) and balances.</p> <p>Temperature controlled apparatus may include laboratory storage rooms, temperature controlled rooms and incubators, ovens, autoclaves.</p>

Continued overleaf

Unit 9 Perform manual laboratory techniques		
Element	Title	Evidence requirements and assessment guidance
9.1	Prepare for manual laboratory techniques	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 preparing for three different types of manual techniques 2 selecting two types of work area 3 all types of equipment 4 all types of materials. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>
9.2	Carry out manual laboratory techniques	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 carrying out three different types of manual techniques 2 two types of work area 3 all types of equipment 4 all types of materials. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>

Continued overleaf

Unit 10 Assist with the processing of specimens using automated laboratory techniques		
Element	Title	Evidence requirements and assessment guidance
10.1	Perform start up and shut down procedures	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 performing start up and shut down procedures on four occasions 2 both types of equipment from the range. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>
10.2	Maintain sample throughput	<p>Evidence requirements</p> <p>Evidence must be provided across all the performance criteria and range statements.</p> <p>Successful performance evidence is required for:</p> <ol style="list-style-type: none"> 1 maintaining sample throughput on four occasions 2 both types of equipment from the range. <p>Simulations should not be used for this element unless opportunities to provide performance evidence are rare or compromise health and safety requirements.</p> <p>You must also provide evidence for all aspects of knowledge and understanding stated in this element.</p>

Continued overleaf

Customer Service Unit 1

Unit 11 Give customers a positive impression of yourself and your organisation		
Element	Title	Evidence requirements and assessment guidance
1.1	Establish effective relationships with customers	<p>Evidence requirements</p> <p>Simulation is not allowed for any performance evidence within this unit. You must supply all the evidence from work you have carried out with customers in your workplace. Your customers can be internal or external to the organisation or a combination of the two.</p> <p>You must prove that you have worked to give your customers a positive impression of yourself.</p> <p>You must produce evidence that shows you have done this over a period of time with different customers on different occasions.</p> <p>As well as creating a positive impression with customers during routine delivery of customer service, you need to include evidence which relates to:</p> <ul style="list-style-type: none"> • very busy periods • quiet periods • periods when you are working under pressure. <p>You also need to show that you have dealt with customers who:</p> <ul style="list-style-type: none"> • have different needs and expectations • appear angry • may be confused. <p>Your evidence must show that you respond to customers within the guidelines of your organisation.</p> <p>Your communication with customers may be face to face, by letter, fax, telephone, e-mail, internet, intranet or any other method you would be expected to use within your job role.</p> <p>You must prove that you communicate with customers effectively by providing evidence that you:</p> <ul style="list-style-type: none"> • use appropriate spoken or written language • apply the rules and procedures suitable for the method of communication you have chosen. <p>Your evidence must show that you have applied the knowledge and understanding requirements when you are dealing with your customers.</p>
1.2	Respond appropriately to customers	
1.3	Communicate information to customers	

Section 3: Assessment

Introduction

This section offers practical advice on all aspects of assessment, from planning assessment opportunities to recording evidence. The guidance should help you to ensure that your assessment is effective, rigorous and appropriate. The section outlines an approach to assessment based on good practice. You may develop your own approach if you wish.

This guidance is written primarily for assessors, but it may also be helpful to candidates.

What is assessment?

Assessment is the key to achieving NVQs. As an assessor, your role is vital in helping your candidates to achieve their award and in ensuring that the requirements of the occupational standards are met. You will need to be clear about what is meant by assessment and what you are assessing.

In deciding whether a candidate should be awarded an NVQ, you will need to go through the following stages:

- becoming familiar with the standards
- planning for assessment
- collecting evidence of the candidate's performance
- judging the candidate's evidence against the NVQ standards and making an assessment decision
- recording the assessment decision.

Roles in assessment

Before beginning the assessment process, both you and the candidate should be clear about your roles.

Assessor's role

The assessor must:

- ensure that candidates understand what is expected of them, what is to be assessed and how it is to be assessed
- ensure that the conditions and materials required for assessment are available
- observe and record candidates carrying out the activities described in the standards – records should say what has been observed, how it was carried out, and what it demonstrated
- know who will act as an internal verifier
- question candidates and record results
- help candidates to gather and provide evidence
- judge evidence
- authenticate the evidence candidates provide
- record achievement
- identify gaps or shortfalls in candidates' competence
- provide feedback to candidates.

Candidate's role

The candidate must:

- prepare for assessment by familiarising themselves with the standards, what is to be assessed and how it will be assessed
- carry out activities and/or answer questions
- gather and present evidence for assessment
- receive and act on feedback from the assessor.

Approaches to assessment

Candidates may approach assessment for NVQs through a variety of routes. Two of the main ways are through work (paid or voluntary) or through a training programme.

Work (paid or voluntary) – when a candidate approaches assessment through work it will probably be your job to help them plan the sequence of assessment, give feedback on how they are performing and arrange for them to acquire any competence that is missing.

Training programmes – in these cases a series of educational or training events, linked to assessment opportunities, will already have been planned. It will be your job to monitor how the candidate is performing, assess their evidence and provide feedback on their progress.

Timing

A candidate may begin their NVQ at any time provided the necessary preparations and plans have been made.

There is no limit on the time a candidate may take to gain the whole qualification or individual unit(s). Some candidates will take longer than others, depending on their understanding of the award, their work setting and personal circumstances. An assessor should therefore organise and arrange assessment appropriate to each candidate, although there must be an agreed target date for completion.

However, it is important that the evidence submitted demonstrates current competence of the task being assessed, particularly if the evidence is from the past.

The five steps to assessment

If you follow the five steps identified, you should be able to ensure that your candidates move efficiently and effectively towards achievement of their NVQ.

Step 1: Plan and organise assessment

You should make sure that candidates receive guidance before starting an NVQ. They need advice to ensure that their existing job remit, skills, experience and plans for progression are matched to the NVQ selected. It does not have to be you, as the assessor, who carries out the matching exercise. In fact, this part of the process is often carried out during induction, but whoever has responsibility for it should ensure that the assessment opportunities available to the candidate are also considered.

You will need to work out how much time you and your candidate are able to devote to the NVQ. This is likely to be limited by the demands of a busy workplace, or by timetabling. If possible, try to agree sessions in advance and stick to them and remember that you need to allow for review and evaluation sessions in addition to assessments. Once this is agreed you can begin planning.

There are two levels of planning:

- the overall plan when you and your candidate look at the whole qualification and set targets for achievement
- individual plans for assessment.

Overall assessment planning

It is good practice for you to agree an overall assessment plan with your candidate. An overall assessment plan should include:

- the overall programme for assessment, identifying how and when each part of the NVQ will be assessed
- target dates for completing each unit. There are no time limits on the amount of time a candidate can take to complete a unit or an NVQ, but target dates will motivate candidates and help you to monitor progress
- how you are going to give feedback
- what happens if there is a disagreement between the candidate and yourself.

Producing an overall assessment plan is the ideal time for you and your candidate to identify opportunities for **integrating assessment**. This is when a piece of evidence generated from one activity is used to prove competence across different elements, performance criteria and/or units. To reduce the assessment burden on you and your candidate you will need to maximise the opportunities for integration.

Through producing the overall plan you may also identify job activities the candidate currently performs that match the standards and can plan to assess them immediately. You may also identify evidence from past achievement that can be used (see 'Accreditation of prior learning' on page 32). If the candidate is providing evidence from the workplace, their job role may mean they are not able to cover all the standards during the normal course of their work. You may need to create new opportunities, such as arranging for your candidate to move to a different department so that different activities can be performed or different skills used. The candidate might also need to attend a college or training course to fill in any gaps.

You may need to reassure your candidate at this stage. Many feel overwhelmed by the apparent amount of evidence they will have to produce, but they will need to realise that with effective planning the process can be made much easier and they will be more likely to succeed.

Individual assessment planning

You and your candidate will need to plan each individual assessment carefully. You will need to decide the methods you will use to carry out the assessment, where and when the assessment will take place and who will be present. You should agree a unit assessment plan that specifies the tasks to be carried out, the time they will take and the parts of the standards that will be covered. (See page 39 for an example of a unit assessment plan.)

Although you need to plan carefully what you are expecting to assess, always be prepared to allow candidates to provide additional evidence if the opportunity arises.

There is no limit to the time it takes for a candidate to complete a unit or NVQ, however, you and your candidate should still set target dates for completing each unit. In reaching agreement, take into account the candidate's job or training programme and clearly mark out the points of decision for each element and unit.

Step 2: Decide on the assessment methods

The methods of assessment you use should be valid, reliable and practicable.

- By **'valid'** we mean that the assessment should be appropriate to the standards.
- By **'reliable'** we mean that the assessment method should ensure consistent results when used with different candidates, different assessors and on different occasions.
- By **'practicable'** we mean that the method should ensure the assessment takes account of available resources, equipment and time.

As an assessor, it is your responsibility to familiarise yourself with the standards you will be assessing. In doing so, you will be able to identify what skills need to be demonstrated and the types of evidence that a candidate needs to generate in order to complete all units of the NVQ.

Once you are familiar with the performance criteria, range and evidence requirements in all the units of the NVQ you will find it easier to decide what is acceptable evidence and how it should be produced by the candidate.

You and your candidate must agree the methods of evidence collection that are most appropriate to the candidate's work setting and patterns. Evidence must be precisely and directly relevant to the particular standards for which a candidate seeks credit; it cannot be just a general indication of acceptable practice.

Assessment methods

All methods of assessment fall under one of three categories: **observation, product evaluation and questioning**.

Observation

Observing performance will be the most common method used in assessing the NVQ.

Observation can be organised in a variety of ways:

- continuously working alongside the candidate
- arranging to work alongside the candidate at specific times
- planning to visit when particularly relevant activities are scheduled
- arranging for particular activities to take place.

The candidate will be able to supplement direct observation of performance with other types of evidence, eg personal statements or witness testimonies. It is also possible to use tape recordings or other technologies to record performance, should your presence as an assessor not be possible.

Observation by an assessor is considered to be the most valid and reliable method of assessment and there will be many naturally arising opportunities for you to use this technique.

You should complete an observation record to show the internal and external verifier how you reached a decision on the candidate's competence. You can find a completed observation record in section 4 and we suggest you use the example as an indication of what information we need. For example, details of the activity, date observed, and how the observation relates to the standards.

Product evaluation

This involves judging products candidates produced during the course of their work. Product evidence will be used a great deal. The exact nature of this evidence will depend on what the candidate's job entails. Examples of product evidence include letters, memos, lists and reports.

Questioning

Candidates have to prove that they have the required knowledge and understanding for each unit. They will often demonstrate it through the production of evidence, though in some cases this will not be possible.

Questioning is the ideal way of proving whether or not the candidate has the necessary knowledge and understanding. Questions can be given in many forms such as short-answer questions, projects, multiple-choice tests, case studies, or assignments.

There may be more emphasis on questioning to prove knowledge in areas where evidence is generated through practical working activities, and where there may be no product evidence. If you are a visiting assessor, you might use questioning to prove the candidate's competence and the authenticity of the evidence.

Questioning is a powerful means of checking the knowledge and understanding that lies behind performance. It is also a useful tool for exploring why a candidate acted in a certain way, or to identify what they would have done if circumstances had been different.

Questions, whether oral or written, should not require candidates to apply their knowledge and understanding in ways that are either more complex or more simplistic than is necessary to achieve the standards.

Supporting evidence

On most occasions the candidate will be able to support your observations with other types of evidence, such as testimony, work products, assignments and projects.

Testimony – personal and witness

It is inevitable that you will not be able to observe everything your candidate does. On such occasions, statements from other people (testimonies) who have seen your candidate working can be useful sources of evidence for the NVQ as they can describe each activity in detail. Generally, testimonies are used to support other evidence produced. You should bear in mind that the strength of evidence will vary, depending on the knowledge and expertise of the person providing the testimony and you will have to take several factors into account when you make a judgement. It may help if you think of a line from strongest to weakest.

Strongest	Stronger	Weaker	Weakest
Professional worker in senior position in same type of work with knowledge of the standards	Professional worker in senior position but with no knowledge of the standards	Colleague with equal experience but no knowledge of the standards	Person with experience of the workplace or knowledge of the standards

Work products

A number of items could be produced by candidates as evidence, for example: copies of records or reports that the candidate has compiled, letters and memos, minutes of meetings, leaflets or booklets that provide information to clients, photographs, audio or videotape recordings of work which the candidate has carried out. Work products will normally be located in the candidate's portfolio and they should be cross-referenced to the performance criteria/elements to which they apply.

Work products **must** be wholly or partially the result of work undertaken by the candidate. To ensure authenticity, the products should be countersigned by a person in a position of responsibility who is able to vouch that the products are the unaided work of the candidate.

Assignments and projects

Assignments and projects are also useful ways to collect evidence. However, you should ensure you are not asking for a competence that is not required by the standards. For example, it may not be necessary for the candidate to be able to write or design a project report in order to satisfy the competence requirements.

Assignments and projects might be a particularly useful way for a candidate to track the course of their work over a period of time and this could be structured to serve the purposes of specific elements of competence. This method of collecting evidence is particularly appropriate for units that link a series of activities such as planning, implementation and evaluation.

However, care must be exercised when judging whether competence in actual practice or knowledge specifications has been demonstrated.

Using simulation

Throughout the NVQ, the emphasis is on the candidate being able to carry out real work activities so assessment will normally be carried out in the workplace itself.

On some occasions though, it might not be appropriate for you to assess a candidate while they are working. Examples might be: where the NVQ requires candidates to carry out emergency or contingency procedures, for safety or confidentiality reasons and/or where a candidate's job role does not cover all aspects of the qualification.

In such instances, and if the candidate has no other means of generating evidence, **simulation** might be appropriate.

Simulation is any structured exercise involving a specific task that reproduces real-life situations. If simulation is used, particular care must be taken to ensure that:

- the conditions in which you are assessing the candidate *exactly* mirror the work environment, ie it is a realistic working environment
- the simulation allows candidates to demonstrate competence across the full range specified in the outcomes
- the evidence generated is sufficient to convince you that the candidate has achieved the required standard of competence and that they are capable of sustaining that performance.

You and your candidate should check the standards carefully to find out the national training organisation's view of what constitutes a realistic working environment. Some NTOs stipulate the specific elements which are suitable for this approach.

For the Clinical Laboratory Support NVQ, **simulation** takes one of the following formats:

- 1 *Models (and manikins)* – simulating the appearance and functioning of real equipment, systems and environments. At the present time, they will tend to be physical although one can anticipate the use of computer generated models as this is already occurring in other areas (eg dentistry and dental technology). They may be used to test physical and cognitive skills. Outcomes may be recorded by the model itself or observed. The most obvious example of such a simulation at present is the demonstration of resuscitation.
- 2 *Practical tests/test rigs* – a test of (usually) manual skills involving realistic tools, equipment, materials and working methods, but conducted in a non-work environment. This produces a physical outcome or artefact which can be examined. In addition, some parts of the process may be observed or recorded. Examples of this might be carrying out microbiological practical experiments in a college of further education.
- 3 *Work-based projects* – a complex activity usually involving a number of associated outcomes and processes. Projects normally involve: data collection, investigation, analysis, calculation, interpretation, synthesis, presentation of findings, and formatting of written reports. Projects usually result in a document that can be examined but some parts of the process may be observed or recorded – particularly verbal presentations. Work-based projects use the facilities, processes, data and information of the normal work environment. Examples of where work-based projects may be used in the clinical laboratory support award is in relation to customer services or in health and safety.

Simulations have been indicated in the evidence requirements when there are limited opportunities for demonstration of competence in the work environment.

- hazards to the candidate or others in the work environment – for example, cleaning/sterilisation procedures, resuscitation of a person who has stopped breathing
- infrequent events where insisting that candidates wait for their occurrence would be unreasonable or create blockages in the assessment system which might carry the risk of demotivating candidates – for example, laboratory emergencies
- critical outcomes where a high degree of confidence is required for the transferability and repeatability of performance – for example, sterilisation and decontamination
- situations in which it is unacceptable to observe or record as this would be obtrusive and unacceptable for reasons of confidentiality – for example, witnessing a disciplinary meeting or recording patient demographic details.

In addition there will be times when individual candidates are not able to provide workplace evidence **because their workplace offers no opportunity to collect the evidence required**, or it only offers limited opportunities for the collection of workplace evidence, or the cost of collecting the evidence is prohibitive. The evidence requirements state where workplace evidence can be substituted in whole or in part by simulated evidence and where they cannot.

It is anticipated that some assessment centres will be able to develop such forms of simulation themselves. In other situations, simulations will be used as part of the independent assessment process (see below).

The realism of assessment – both simulations and assessment in the workplace – directly affects the validity and credibility of the assessment. In relation to simulations, the more ‘real’ the simulated environment and the candidate’s perception of the environment, the more valid and reliable the candidate’s response. Indeed, if simulations are not sufficiently realistic to convince the candidate of its relevance, this may create tensions and stress that can affect the candidate’s performance. The Science Technology and Maths Council is concerned to ensure that:

- the **competence demonstrated** by the candidate in a simulation **will transfer** to the workplace – if a simulation is not realistic, then the response of the candidate will be different from the response that would be expected in the workplace. If the candidate perceives the simulation to be unrealistic and lacking relevance, then they will not provide a true reflection of their actual competence. So the planning and design of simulations will need to include the support and guidance given to the candidate to help them recognise the relevance and potential transfer of the evidence – not just a concern with the ‘hardware’ which might be needed to set up the simulation
- the **competence demonstrated** in a simulation **can be sustained over time** – this related to the fact that simulations can involve extremely ‘contracted’ versions of what actually happens in the workplace. It is essential that sustained practice in the workplace is taken into account when simulations are designed.

In the context of assessing candidates for NVQs, ‘reality’ means the contexts, environments and conditions described in the standards against which the assessment is taking place.

Realism in the assessment of clinical laboratory support staff, will relate to the extent to which the simulation is able to:

- faithfully capture the essence of the clinical laboratory support team-patient/client interaction
- make use of the same materials and equipment which would be found in an up-to-date clinical laboratory
- ask the clinical laboratory support staff member to carry out activities which they would normally undertake, in a non-intimidatory environment.

Accreditation of prior learning (evidence from past achievement)

In assessing candidates for an NVQ, evidence relating to past performance can be used as well as that relating to current performance.

In recent years, the concept of accrediting prior learning (APL) has developed as a way of ensuring that the past experiences and learning of mature people is recognised and validated. Nevertheless, it must be remembered that NVQs are awarded on the basis of assessment of performance against standards.

The competence basis of NVQs means that evidence must always relate to performance, not just knowledge. The evidence of such performance must always be valid and relevant to specific standards.

Step 3: Judge the evidence

The following criteria must be used when evaluating if a piece of work can be put forward as evidence, including supporting evidence.

- **Relevance:** the degree of ‘match’ between the item of evidence and the required competence, range statement and underpinning knowledge for a unit. If the evidence does not match, it is not relevant.

- **Validity:** the evidence must relate to a specific part of the NVQ standards.
- **Authenticity:** the evidence must be the work of your candidate as an individual and not someone else or a group of people. You may require confirmation of this from the candidate's professional colleagues.
- **Currency:** the evidence must show the present ability of the candidate to perform to the national standards. The assessor should judge the acceptability of evidence from the past by the length of time that has elapsed since the performance described took place. Such judgements should take into account the 'perishability' of the skill involved, as well as 'watershed' or 'landmark' occurrences in the sector, such as changes in the law, philosophy of practice. (If the competence is demonstrated in a skill test or simulation, then it becomes evidence of current competence rather than evidence from the past.)
- **Quantity:** the evidence must cover all the performance and knowledge requirements laid down in the standards.
- **Variety:** there must be evidence of performance in differing contexts or situations.
- **Sufficiency:** performance to the required standard must be consistent, ie it should be achieved on more than one occasion.

You have to be certain that the candidate has demonstrated competence. Even though all the performance criteria have to be met, you should concentrate on the elements and units when making judgements about sufficiency as they describe what is required. It is not necessary to observe each performance criterion several times but it is necessary to record all evidence that has been taken into account so that it can be identified by internal and external verifiers if necessary. Evidence will have different values – some will leave you in no doubt about competence, while in other cases, you may need to ask for further evidence before you are confident about consistency of performance.

In short, you must be satisfied that your candidate can consistently work to the required standard and that evidence is not simply an isolated event that is unlikely to be repeated.

The standards also specify that candidates prove they have **knowledge evidence** (what the candidate needs to know about). Candidates' knowledge might be determined either by questioning them on the subject matter, or through validated evidence from recognised educational and training courses. It can also be revealed in performance evidence generated by your observations of the candidate.

You should feel confident that candidates have a broad and firm enough understanding to be able to sustain competence demonstrated through performance evidence.

Candidates will need to be clear about the knowledge requirements for each unit. You should encourage your candidates to read and study each unit as a whole so that they become familiar with the standards expressed in the elements, performance criteria, range statements, performance and knowledge evidence requirements.

Candidates should also be able to cross-reference their evidence, providing examples and definitions where necessary.

Some candidates may need considerable support and guidance to interpret the standards, especially in the early stages of preparing for assessment. Once they become familiar with the format of the standards, candidates should find it much easier to progress through their qualification.

The judgement of whether or not your candidate understands and applies the knowledge evidence is linked to your judgement of their performance.

Step 4: Record

For each unit, you should ensure that there is a verifiable record of:

- the assessment activities carried out, showing the methods used and evidence produced
- the date and people involved in the assessment
- your judgement of the candidate's competence
- the location of each piece of evidence within the candidate's portfolio.

The record sheets provided in the candidate's log book will allow all of this information to be recorded and we recommend their use. However, your centre may use its own recording documentation. This is acceptable as long as it contains all the required information and is passed by your external verifier as fit for purpose.

Insufficient evidence

Where insufficient evidence has been presented or the candidate has not met the performance criteria at the end of the targeted assessment period, you should indicate that the candidate is not yet competent. Feedback to the candidate must provide the reason why the decision has been made and this should be recorded.

Step 5: Provide feedback

Your candidate will need to be clear about your judgements and the reasons for them. Time should be set aside for feedback that conforms to the following general principles:

- feedback should relate the evidence provided to the national standards
- you should agree what form the feedback will take – written notes are always useful as a record but candidates should be given time to reflect on your comments:
- you should ensure that your comments have been understood and listen to the candidate's view
- finally you should agree what happens as a result of the feedback – its purpose is to help candidates make the necessary adjustments, whether this means supplying more evidence, trying again or taking steps to develop the competence that is missing.

Disagreement

Your centre will have an appeals procedure to be used by candidates if they disagree with an assessment decision you have made. Make sure you are familiar with the procedure and that candidates know how to use it.

The appeals procedure should make it clear how complaints will be dealt with and what the outcomes might be.

As an assessor, you should make sure that you have a route through which you can express your concerns and reservations, whether these are about working with a particular candidate or an aspect of the standards and assessment method.

Section 4: How should evidence be presented?

The candidate's evidence is normally kept in a file, often called a portfolio. We produce a document called *Candidate guidance and log book*, which provides all the forms candidates need to record their progress and to help them index their evidence.

This section explains how and when to use the recording forms in the log book and provides worked examples.

Example 1: Index of evidence

The index of evidence should be placed at the front of a candidate's portfolio. As candidates produce pieces of evidence, they should give each piece a unique number. They should then complete the index of evidence so the evidence can be located easily. Every piece of evidence should be numbered and referenced on the index, including evidence that is not located in the portfolio, such as products that need to be kept at temperatures above or below ambient temperature. This might include microscopic preparations, stained with fluorescent dyes or electrophoresis gels. Even if such products cannot be retained within the portfolio, however, it is useful to incorporate photographs of them.

The final column of the sheet should be completed by the internal verifier if they sample the evidence.

Example 2: Unit assessment plan

Before candidates begin to collect any evidence it will be helpful for them to compile, with your help, an assessment plan. The plan will define the tasks to be carried out, how long the tasks will take and the evidence that will be generated. The tasks could be 'normal working activities' and part of the candidate's day-to-day job role, or 'activities needing to be performed', which means opportunities to carry out the tasks need to be generated.

Producing a unit assessment plan will help to identify suitable opportunities for integrating assessment of different units.

Example 3: Unit progress record

This form enables you and your candidate to see at a glance what stage the candidate is at in this qualification.

Each time your candidate achieves a unit of their NVQ, you should put your signature and the date next to the relevant unit title. Before signing next to a unit title, you will need to make sure that the candidate has completed the recording documents correctly and that their evidence can be easily located.

Example 4: Element achievement record

This lists the performance criteria and range in an element that your candidate needs to prove competence for. Each time your candidate meets the requirements of an outcome, you should write the date in the relevant box. The standards will stipulate how many times the candidate needs to perform individual activities.

On completion of each element, you should give your candidate feedback about their performance, informing them if they have been successful in achieving the required level of competence for individual outcomes. There is space on the back of the form for you to make comments and/or notes from the feedback session. Make sure that your candidate is clear about your assessment decision and fully understands what you are saying. You should both then sign and date the form before filing it into the relevant section of the candidate's portfolio.

Example 5: Knowledge evidence record

This lists all the knowledge and understanding requirements a candidate needs to demonstrate for a unit.

While working through individual elements, the candidate should tick the appropriate boxes on the form to show which type(s) of evidence they have collected to prove they have the required level of knowledge and understanding.

Once you are satisfied that your candidate has achieved the knowledge and understanding requirements for the whole unit, you should, as with the element achievement record, note your comments from the feedback session on the form. You and your candidate should then sign and date the form before filing it in the portfolio.

Remember that on completion of the unit you should complete the candidate's unit progress record.

Example 6: Personal statement

A candidate uses a personal statement to record their experience of something, such as how they handled a specific situation. They should describe what they did, how they did it and why they did it. They can refer to other people who were present. This might provide the candidate with a 'witness testimony' (see example 8), which should be noted in the 'Links to other evidence' column on the statement form.

The candidate might also use the personal statement to put a piece of evidence in context for you so you can help them decide if it is relevant to their NVQ. For example, the candidate may refer to paperwork that is used in the organisation to pass information to a colleague. It may not be clear to you why they are communicating in this way and a brief explanation from the candidate of its relevance may be required.

Example 7: Observation record

You should use this form to record your observations of the candidate as they work. The form allows you to:

- describe the skills you have seen the candidate use
- describe the activities you have seen the candidate perform
- specify the parts of the units that are covered by the observation
- provide details of the knowledge and understanding apparent from the candidate's performance
- list the other units/elements to which the evidence may contribute (integration of assessment).

There is space on the form for you to note your comments or feedback to the candidate. Once completed, the form should be referenced as evidence and included in the candidate's portfolio.

Example 8: Witness testimony

There may be occasions when you are not able to observe the candidate carrying out certain aspects of their job. In such instances, it may be appropriate for another person to comment on the candidate's performance by completing a statement called a 'witness testimony'.

Witness testimony should only be used to support other forms of evidence such as a product. It should:

- be provided by a person who is not related to the candidate and is in a position to make a valid comment about their performance, eg a supervisor, line manager, a client or customer
- contain comments that specifically relate the candidate's performance to the NVQ standards
- be authenticated by the inclusion of the witness's signature, role, address, telephone number and the date.

Example 9: Record of questions and candidate's answers

This form is used to record any questions you ask the candidate to establish they have the underpinning knowledge and evidence required by a unit. The candidate's answers should also be noted. Both you and the candidate should sign and date the form.

Example 1: Index of evidence

NVQ title and level: Clinical Laboratory Support Level 2

Evidence number	Description of evidence	Included in portfolio (Yes/No) <i>If No, state location</i>	Units/elements evidence links to (give specific numbers, eg 5.2.1)	Internal verifier signature and date of sampling
1	Direct observation – dealing with spillage of alcohol	Yes	1.1/1.2 (Unit 1, Element 1.1); cross references to (Unit 1, Element 1.2)	Doreen Brady 25/11/00
2	Direct observation – disposal of aerosol containers	Yes	1.1/1.2	Doreen Brady 25/11/00
3	Witness testimony – disposal of ‘sharps’ into appropriate bin	Yes	1.1/1.2	Doreen Brady 25/11/00
4	Short answer questions – storing and transporting waste according to SOPs (candidate responses and model answers)	Yes	1.1	Doreen Brady 25/11/00
5	Video tape – preparing waste for autoclaving and incineration according to SOPs	Yes	1.1	Doreen Brady 25/11/00
6	Direct observation – disposing of confidential records according to SOPs	Yes	1.1	Doreen Brady 25/11/00
7	Planned assessment with assessor – illustrating the safe storage arrangements for hazardous materials	Yes	1.1/1.2	Doreen Brady 25/11/00
8	Photocopied page from the accident/incident reporting book, recording incident where colleague slipped on alcohol spillage (with personal details blanked out)	Yes	1.1/1.2	Doreen Brady 25/11/00

Example 2: Unit assessment plan

Unit 2: Maintain effective work and working relationships

Candidate: Ian MacBean

Assessor: Chris Frost

Normal working activities performed

	Typical evidence	Work area	Expected completion date	Links to other units/elements
Element:				
2.2	<i>Direct observation and witness testimonies – demonstrates maintenance of effective working relationships eg working in teams</i>	Laboratory	30/11/00	1.2 (Unit 1, Element 1.2); 2.1; 3.3; 5.1; 5.2; 11.1; 11.2; 11.3
Element:				
2.1	<i>Personal statement, witness testimony and certification of successful course outcomes – maintains and improves your performance in the laboratory eg participation in job-related education and training</i>	Laboratory and local further education college	30/11/00	3.3; 9.1
Element:				
2.2	<i>Direct observation, witness testimony and work products – demonstrates you can attain targets and finish tasks you have been set shows your standard of work is of the highest quality confirms that you reflect on your performance and achievements</i>	Laboratory	30/11/00	2.2; 5.2; 8.1; 9.2

Activities needing to be performed

Element:				
2.1	<i>Routine laboratory duties</i>	Laboratory	30/11/00	1.2 (Unit 1, Element 1.2); 2.2; 3.3; 7.1; 7.2; 11.1; 11.2; 11.3
Element:				
2.1	<i>Attendance at college course; sit and pass practical and theory tests</i>	Laboratory and local further education college	30/11/00	3.3; 9.1
Element:				
2.1	<i>Routine laboratory work and sit short answer questions test</i>	Laboratory	30/11/00	2.2; 7.2; 8.1; 9.2

Additional comments

Since we shall be working together, we can aim to gather most evidence in the course of our working day. However, take any opportunity that arises to gain additional evidence, either for this unit or for others.

Assessor's signature: Chris Frost

Date: 1/11/00

Candidate's signature: Ian MacBean

Date: 1/11/00

Example 3: Unit progress record

Qualification and level: Clinical Laboratory Support Level 2

Candidate: Ian MacBean

To achieve the whole qualification, you must prove competence in **five mandatory** units and **two optional** units.

Unit checklist: circle the reference number of each unit as you complete it

Circle the reference numbers as you complete each unit. You can then easily see what stage you have reached in your NVQ.

Mandatory	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	
Optional	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Customer Service Unit 1

Mandatory units

You must achieve **all five** of the units listed.

Unit number	Title	Assessor's signature	Date
Unit 1	Maintain health and safety in the clinical laboratory environment	Chris Frost	14/02
Unit 2	Maintain effective work and working relationships	Chris Frost	14/02
Unit 3	Maintain laboratory information and communications	Chris Frost	14/02
Unit 4	Receive, sort, store and transport specimens		
Unit 5	Assist with the preparation of specimens		

This section of the form is for your assessor to sign each time you successfully achieve a unit.

Continued overleaf...

Optional units

You must achieve **two** of the units listed

Unit number	Title	Assessor's signature	Date
Unit 6	Store, maintain and supply working stocks or reagents and consumables		
Unit 7	Prepare solutions for use in the laboratory		
Unit 8	Assist with the routine maintenance and use of clinical laboratory equipment		
Unit 9	Perform manual laboratory techniques		
Unit 10	Assist with the processing of specimens using automated laboratory techniques		
Customer Service Unit 1	Give customers a positive impression of yourself and your organisation		

Example 4: Element achievement record

Evidence achievement record

Unit 5 Assist with the preparation of specimens

Element 5.1 Make the work area and equipment ready for specimen preparation

Performance criteria	Assessor to insert date each time competence is achieved				
You must ensure that:					
a you carry out your work in accordance with standard operating procedures	18/12	19/12	22/12	23/12	<input type="checkbox"/>
b you select a suitable work area for preparing the specimen	18/12	19/12	22/12	23/12	<input type="checkbox"/>
c you select and set up the necessary equipment correctly	18/12	19/12	22/12	23/12	<input type="checkbox"/>
d you obtain the necessary materials for the preparation of the specimen	18/12	19/12	22/12	23/12	<input type="checkbox"/>
e you confirm that the specimen is suitable for preparation	18/12	19/12	22/12	23/12	<input type="checkbox"/>
f you use the appropriate protective clothing and equipment for the work	18/12	19/12	22/12	23/12	<input type="checkbox"/>
g safe working procedures are followed at all times	18/12	19/12	22/12	23/12	<input type="checkbox"/>

Evidence achievement record

Unit 5 Assist with the preparation of specimens

Element 5.1 Make the work area and equipment ready for specimen preparation

Range	Assessor to insert date each time competence is achieved				
Work area:					
1 fume cupboard	18/12	19/12	22/12	23/12	<input type="text"/>
2 bench	18/12	19/12	22/12	23/12	<input type="text"/>
3 safety cabinet	18/12	19/12	22/12	23/12	<input type="text"/>
Equipment:					
1 containers	18/12	19/12	22/12	23/12	<input type="text"/>
2 centrifuges	18/12	19/12	22/12	23/12	<input type="text"/>
3 measuring equipment	18/12	19/12	22/12	23/12	<input type="text"/>

Example 5: Knowledge evidence record

Knowledge evidence record

Unit 5 Assist with the preparation of specimens

Element 5.1 Make the work area and equipment ready for specimen preparation

Evidence key:

EI	Evidence Index No.	O	Observation	P	Personal Statement
WT	Witness Testimony	S	Simulation	APL	Accreditation of Prior Learning
Q&A	Questions and Answers				

Knowledge, understanding and skills for this unit:

You must know and understand:	Type of evidence						
	EI	O	P	WT	S	APL	
Legislation and policy							
1 your responsibility and that of your employer for maintaining health and safety under relevant legislation and organisational policy	23		✓	✓	✓	✓	18/12
2 the requirements of standard operating procedures	14,15 32	✓	✓	✓			18/12
Preparing specimens							
3 the conditions in which the work must be carried out	15, 32	✓		✓			18/12
4 the types of specimens which are handled within your laboratory	14, 23	✓		✓			18/12
5 the methods used for preparing specimens within your laboratory	14, 23		✓	✓	✓		18/12
6 the necessary equipment and materials for preparing specimens	17, 18		✓	✓	✓		18/12
7 how to confirm that the specimen is suitable for preparation	32		✓	✓			18/12

Note: You will be given advice on how much of evidence of achievement you need to prove through performance evidence. The remaining parts of the evidence of achievement may be covered through questioning by your assessor.

Unit 5 Assist with the preparation of specimens

Feedback/comments

Ian: this has been an extremely productive unit, particularly in terms of your knowledge and understanding. However, you are a little unsure of the departmental policies for storing carcinogenic compounds. I recommend that you spend some time with Yvonne and learn how she stores these materials.

It may help to reinforce your understanding if you read the relevant sections in the department's COSHH directory. We shall need to revisit this aspect in the future before you can be signed off as fully competent.

Other than that, this is excellent work! Well done!!

The candidate has satisfied the assessor and internal verifier that the performance criteria, evidence, knowledge and understanding requirements have been achieved.

Candidate:	Ian MacBean	Date: 19/02/01
Assessor:	Chris Frost	Date: 19/02/01
Internal verifier:	Doreen Brady	Date: 19/02/01

Example 6: Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (<i>enter numbers</i>)	Units, elements, national standards covered
4/9/00	37	<p>Storyboard about calibrating balance, prior to weighing salt and making a solution of isotonic saline</p> <p>When making up isotonic saline, it is extremely important to ensure accuracy of measurement, both of solute (sodium chloride) and solvent (water). The reason for this is that the concentration of salt must be 0.9%. Therefore, for every 100ml solution, there must be 0.9g salt.</p> <p>In order to ensure the weighing is accurate, my first job was to calibrate the weighing balance, using brass weights. I switched on the balance at the power point, waited for the reading to settle and then placed a brass weight on to the pan, inside a weighing boat. When the balance read the exact weight of the brass, as I had turned the knob to the left to eliminate the weight of the weighing boat, I knew that I could accurately measure 4.5g sodium chloride and dissolve it in 500 ml water to make up a solution of 0.9% sodium chloride.</p>	39	<p>Unit 5, Element 5.1, PCs (a), (b), (c), (d), (e), (h), (i)</p> <p>Range: Equipment weighing equipment;</p> <p>Work area bench;</p> <p>Materials solid</p> <p>Unit 5, Element 5.2, PCs (a), (e), (i), (j)</p> <p>Range: Constituents solids</p>

Candidate's signature: *Ian MacBean*

Date: *14/05/01*

Example 7: Observation record

Unit/element(s) 1.1

Candidate: Ian MacBean

Date of observation: 27/03/01

Evidence index number: 11

Skills/activities observed:	National standards covered:
<p><i>a following basic hygiene rules, including wearing special protective clothing, gloves, goggles etc</i></p> <p><i>b following guidelines designed to prevent work-induced injuries eg repetitive strain injury</i></p> <p><i>c the safe disposal of soiled protective clothing etc</i></p> <p><i>d following fire safety rules, including wearing special protective clothing, gloves, goggles etc when wiping up spillage of harmful liquid</i></p> <p><i>e the recognition of flammable materials and how they should be handled</i></p> <p><i>f the safe disposal of flammable materials</i></p> <p><i>g identifying actual or potential laboratory hazards, including potential or actual evidence of unsafe practice</i></p>	<p>(a), (b), (c), (e), (f), (g), (i), (j)</p> <p>Range statements: Health and safety concerns: Laboratory hazards; unsafe practices; spillages; risk</p> <p>Hazardous materials: Flammables; biological</p> <p>Emergencies: Fire; spillage of hazardous liquid</p> <p>Waste: Biological materials; solvent drums</p> <p>Waste containers: Colour coded plastic bags</p>

Knowledge and understanding apparent from this observation:

Legislation and policy; 1,2

Health and safety in the laboratory; 3, 4, 7, 8, 9, 10, 11, 12, 13

Hazards and hazardous materials; 14, 15

Other units/elements to which this evidence may contribute:

Unit 1, Element 1.2

Unit 2, Element 2.1

Assessor comments and feedback to candidate:

The above evidence was gathered during our routine working day. You have demonstrated competence in the area of health and safety. However, in order to identify 'sufficiency', we shall need to observe the same, or similar, performance again. Nonetheless, you have done extremely well both in practical performance and in backing this up with underpinning knowledge. Good stuff!

I can confirm the candidate's performance was satisfactory.

Assessor's signature: *Chris Frost*

Date: *26/11/02*

Candidate's signature: *Ian MacBean*

Date: *26/11/02*

Example 8: Witness testimony

NVQ title and level:	Clinical Laboratory Support – Level 2		
Candidate name:	Ian MacBean		
Evidence index no:	23		
Where applicable, evidence no to which this testimony relates:	41		
Element(s):	1.2	Range:	Incidents (1)
Date of evidence:	27/11/02		
Witness name:	William White		
Relationship to candidate:	Work colleague		
Details of testimony:			
<p>Whilst I was walking through the laboratory, I slipped on some water. Ian was working at the bench and helped me to my feet, checking that I was unhurt. He cleaned up the spillage and we jointly filled in a report in the accident book.</p>			
I can confirm the candidate's evidence is authentic and accurate.			
Witness signature:	<i>William White</i>		
Name:	W.R.White		
Date:	27/11/02		

Please tick (✓) the appropriate box.

D32/D33 Award

Familiar with the NVQ standards to which the candidate is working

Example 9: Record of questions and candidate's answers

Unit 3: Develop customer relationships	Element(s): Whole unit
Evidence index number: 19	
<p>Circumstances of assessment:</p> <p>Ensuring all knowledge and understanding is covered. Much had been covered during direct observation sessions, on previous occasions.</p>	
List of questions and candidate's responses:	
<p>Q: What is the function of standard operating procedures?</p> <p>A: Standard operating procedures, as the name implies, ensures that everyone in the laboratory performs specified jobs in the same way. This ensures that quality standards are maintained and, if there is a problem, it is that much easier to identify where the fault lies.</p> <p>Q: Why is it important to have an individual performance appraisal?</p> <p>A: This enables my line manager to discuss how well I am contributing currently, what potential there is for personal or career development and what education and training needs to be put in place for my to realise my potential.</p>	
<p>Assessor's signature: <i>Chris Frost</i></p>	<p>Date: <i>28/11/02</i></p>
<p>Candidate's signature: <i>Ian MacBean</i></p>	<p>Date: <i>28/11/02</i></p>

Section 5: Further information

How does an organisation become a centre?

An organisation can offer NVQs either by becoming a registered centre in its own right or by working with an organisation that has this status.

A centre is responsible for ensuring that internal quality control mechanisms are in place. Specifically, a centre needs to:

- develop a physical resource within the centre that addresses the needs of candidates
- select and train assessors and internal verifiers according to the relevant NTO specifications
- provide appropriate assessment opportunities for candidates, eg a suitable number at suitable times
- provide candidates with copies of the Level 2 NVQ in Clinical Laboratory Support units appropriate to their qualification
- provide assessors and internal verifiers with copies of the Level 2 NVQ in Clinical Laboratory Support standards.

Details of approval procedures are available from Customer Services.

Review and evaluation

The effective development of the programme depends on a full review of its operation and candidate performance. The review should be structured to allow all interested parties (candidates as well as staff) to contribute. The review should evaluate:

- success in meeting and the continuing relevance of the aims of the programme
- previous action plans
- admission, induction, advice and exit arrangements
- the programme of activities and arrangements for all candidates
- the assessment strategies and methods
- resource needs and availability of the resources to candidates
- the relevance, currency and effectiveness of support materials
- the external verifier's/comments
- future resource requirements, including staff development.

A review should take place at least once during each programme. A report and an action plan describing the findings and actions to be taken should be produced after each review.

Registration

Every candidate must be registered with an assessment centre that has been approved to deliver Level 2 NVQ in Clinical Laboratory Support.

To register, candidates should complete an Edexcel registration form (available from your centre contact, or Student Services, Edexcel Foundation, Stewart House, 32 Russell Square, London, WC1B 5DN). The form should be returned to Edexcel via the candidate's centre contact. Edexcel will register candidates, and issue them with an enrolment number. Candidates should check this and ensure all their details are correct. The notification will show their name as it will appear on any award they receive. Any correction should be communicated to Edexcel immediately.

An initial registration fee has to be paid to Edexcel at this stage. Each assessment centre will have its own procedures for this, and will clarify with candidates what payments, if any, they will have to make, and when.

Candidate entries

Entries for NVQs will be accepted on a group award or unit-by-unit basis.

In most cases, candidates will be entered for a group award, as well as for the component units. If you enter a completion date for the group award, you need not enter the completion date for the component units (providing the completion date is the same) as verification will be carried out on the whole-group award.

All NVQ entries will need to be processed 10 weeks before the end of the month you have given as the completion date.

Please note that for NVQ units and group awards, there is no discretion in the application of the 10-week rule. We, like all other NVQ and SVQ awarding bodies, are required to operate this rule to comply with the national criteria for accreditation as an awarding body. This means that no NVQ certification can take place until the 10-week period has elapsed.

Certification process

To enable candidates to receive their qualification efficiently, it is essential that you are familiar with the certification procedures used by Edexcel.

Once a unit has been achieved and the unit achievement form countersigned by the internal verifier, the centre contact should register this with Edexcel.

Details of the candidate's achievement will be entered in our records, and we will issue a 'Record of Achievement'. This will be sent to the centre contact to be passed on to the candidate.

When the candidate has achieved all the required units, we will issue the NVQ certificate.

Centre contacts should be aware of Edexcel requirements. For example:

- relevant forms and documents, and how to complete them
- the accredited centre number and relevant contacts
- appropriate Edexcel contacts
- how long qualifications take to process.

Your centre should inform assessors and internal verifiers on the administrative procedures used before assessment of candidates begins.

All assessors should ensure that there are full records of assessment and related evidence available for inspection by the external verifier. Such inspection is part of the external verifier's role, to ensure that the accredited centre is maintaining quality standards.

If there is a problem

Should a Record of Achievement or certificate not arrive when expected, the centre should contact Edexcel and have available:

- the candidate's enrolment number
- the centre's registration number
- the name and number of the scheme and qualification that the candidate has entered, eg NVQ Clinical Laboratory Support Level 2.

This ensures that the correct records can be accessed as quickly as possible.

Payment of fees

Edexcel will invoice the assessment centre for all fees due, both for registration of new candidates and certification of candidates' achievement. The assessment centre is responsible for paying these fees to Edexcel and for making its own arrangements to claim any fees due from candidates or their employers.

Anti-discriminatory practices

As part of the approval process, centres are required to ensure that they have an equal opportunities policy that covers all aspects of assessment including access to assessment and taking into account the timing and frequency of assessments. Internal verifiers have a key role in their work with assessors to ensure that assessments do not discriminate against any candidates.

All centres should publish an appeals procedure, which is made available to staff and candidates.

Special assessment arrangements

Candidates with a physical disability, a sensory impairment, a specific learning difficulty, or a temporary disability at the time of the assessment may be eligible for special assessment arrangements.

Special assessment arrangements are intended to enable candidates to demonstrate their level of competence in relation to the qualification standards. They are not intended to compensate for lack of competence and should not:

- give an unfair advantage to candidates
- reduce the validity and reliability of the assessment or compromise the credibility of the award
- mislead users of Edexcel certificates about candidates' competence.

It is important to note that where special assessment arrangements are applied, they may result in an amended certificate being issued. Any requests for special assessment arrangements need to be submitted to Edexcel at the earliest possible date and separately from the entry itself.

What else you should read

The following publications provide additional information that is directly relevant to the provision of NVQs:

	Publication code
• <i>The Accreditation of Prior Learning (APL)</i>	80-092-0
• <i>Edexcel Policy Framework</i>	revised annually
• <i>Student Services Handbook</i>	revised annually
• <i>Recording Achievement for NVQs</i>	80-094-2

To order these publications, please contact:

Edexcel Publications
Adamsway
Mansfield
Nottinghamshire
NG18 4FN

Telephone: 01623 467467
Fax: 01623 450481
E-mail: publications@linneydirect.com

For further information about these or any other qualifications, please contact Customer Services on 0870 240 9800.

Where are the standards available from?

The standards have been produced by the National Training Organisation for Level 2 NVQ in Clinical Laboratory Support and are available from:

Science, Technology and Mathematics Council
12 Old Queen Street
London SW1H 9HP

Telephone 020 7225 1155
Fax: 020 7225 1997
Website: www.stmc.org.uk

The standards have been written in a user-friendly way to give as much guidance as possible to candidates, assessors and centres. All centres **must** have a copy of the standards and these should be available to candidates, assessors and internal verifiers.

Section 6: Assessment Strategy for the NVQ in Clinical Laboratory Support

Science Technology and Mathematics Council
(A division of EMTA)

Assessment Strategy for an S/NVQ in Clinical Laboratory Support at Level 2

(Approved by Awarding Bodies – October 2002)

Introduction

The Project Team has worked closely with the Standards Setting Body (the Science Technology and Mathematics Council), the Institute of Biomedical Science, IHCD Health & Care Ltd, Edexcel, City & Guilds, SQA, and QCA to develop this independent assessment strategy.

The assessment strategy that has been developed for Clinical Laboratory Support, draws on work undertaken across the Standard Setting Body's remit. The Standards Setting Body uses workforce information gathered as part of the occupational mapping of the sector on which to base proposals for the development of occupational standards and related qualifications.

Proposal for an N/SVQ

A proposed National Vocational Qualification (NVQ) and Scottish Vocational Qualification (SVQ) level 2 has been developed based on a mandatory and options unit structure. This comprises five mandatory units and six optional units. (See proposed Qualification Structure attached, *Annex 1*.)

Candidates will be expected to demonstrate competence in the five mandatory units and two of the optional units in order to achieve the full N/SVQ.

Focus of assessment in the N/SVQ for Clinical Laboratory Support

NVQs and SVQs are based on National Occupational Standards and assess the application of skills, knowledge and understanding in a specific occupation to the standards required in the workplace. It is anticipated that the majority of the assessment for N/SVQs will take place as candidates carry out their usual duties in support of the clinical laboratory team. However, there will be circumstances when it is appropriate to assess candidates under simulated working conditions. Although, it will not be allowed for a candidate to use a majority of simulated evidence to achieve their N/SVQ; the use of simulation as a means of gathering evidence on candidate performance is acceptable but only in those instances that display one or more of the following characteristics:

- where health and safety could be compromised by seeking workplace evidence
- where the situation under which assessment occurs happens infrequently in the workplace
- where the responsibility for the work rests with the candidate, but it is usually delegated and they have limited opportunity to demonstrate it

- where there would be an unacceptable risk in securing workplace assessment
- where equipment needs to be placed in an unacceptable operating state to allow for assessment to take place
- where simulation is used, it must have the following characteristics
- for all simulations, the simulated activity must be designed to realistically reflect conditions in a workplace environment, consistent with a normal workplace, including
- the presence, actions and capabilities of other interactive personnel
- the urgency with which the activity must be carried out and the time needed to complete it
- the number and sequence of actions needed to complete the activity
- the number and complexity of the factors affecting the activity
- the skills and knowledge needed to carry out the activity
- the nature and availability of resources needed to carry out the activity
- access to references and sources of advice and assistance that could be needed if problems arise
- the type of documentation to be completed
- the standards to which the activity must be carried out, including any practices and procedures which must be followed
- the outcomes which the activity will produce.

Centre proposals for the use of simulation should be approved by the Awarding Body in advance of being used and may be rejected if they fail to comply with the characteristics listed above.

NOTE: Simulated evidence is not acceptable for the achievement of the imported Customer Service *Unit 1: Give customers a positive impression of yourself and your organisation*. (This is prescribed by the Institute of Customer Service as the SSB.)

Methods of achieving external quality control of assessment

Independent assessment is a means of applying some form of external quality control on assessment and requires that a significant part of the assessment for an N/SVQ is carried out in a manner which is demonstrably independent of anyone who might have a vested interest in the outcome of the assessment decision. It is for the Standards Setting Body to determine which part of the National Occupational Standards should be covered by independent assessment.

Summary of the assessment review is attached as *Annex 2*. This review informed the decisions stated below.

It is proposed that external quality control of assessment be achieved through enhancing the external verification process. Where a candidate's competence is assessed against the standards as they carry out their normal duties in a clinical laboratory support team, or working under simulated conditions in an assessment centre ie a training environment at the workplace, enhanced external verification of the assessment process will be undertaken. This will include both assuring the quality of the centre that is responsible for making the assessment and sampling from the judgements made by assessors for a number of candidates to ensure they consistently meet the standards.

The Standards Setting Body, acting on behalf of the sector, plan to work with a forum of the awarding bodies that are offering the Clinical Laboratory Support N/SVQs to ensure that:

- there is a comprehensive strategy to ensure the level of sampling undertaken in external verification is sufficient to guarantee consistently high standards between different centres and between different awarding bodies based on the awarding bodies' risk assessment mechanisms
- external verification would take place using scrutiny of documents and direct observation in assessment centres (subject to the need for confidentiality of patient information). Awarding bodies will arrange for their external verifiers to be regularly brought together to review the process
- detailed scrutiny of the way that nominated units from the qualifications are being assessed, is undertaken by the external verifier on an annual rolling basis agreed between the Standards Setting Body and the awarding bodies. In year one of the accreditation of the N/SVQ, three Units of the standards will be scrutinised, followed by units another three in year 2 and the remaining four in year 3. If any issues occur that necessitates further scrutiny, units re-scrutinised will be in addition to the scheduled annual programme. Note: This does not exclude an awarding body raising problems that may arise with any unit during the verification process and should not restrict centres implementing Internal verification programmes that focus on the needs of the centre as these will be expected to complement and inform the overall review process.

Any quality issues identified during the verification process will be fed back to the identified awarding body and discussed at the awarding body forum. The identity of the centre will **not** be disclosed.

External verifiers are independent of the N/SVQ assessment centre(s) where they are verifying.

External verification is planned and linked to intelligence about assessment centre functioning and abilities. Awarding bodies routinely look at and evaluate compliance and then alter the level of activity accordingly.

Summary: The Standards Setting Body in consultation with sector stakeholders and awarding body partners believe that this is the best way of externally assuring the quality of assessment for the following reasons:

- 1 It recognises the range of employment settings in which clinical laboratory support staff are employed generally in small numbers in diverse laboratories; and the inherent difficulties of gaining reliable assessments across this diverse employment context.
- 2 It recognises public concerns about nationally accredited qualifications being judged solely by individuals who know the candidate.
- 3 It recognises the changes that have been made in recent years to improve the rigour and robustness of the external verification process.
- 4 It will enhance collaborative working between Standards Setting Body and the awarding bodies in the interests of the public and the sector.

Occupational expertise of assessors and internal verifiers of the standards and qualifications

It is proposed that Clinical Laboratory Support N/SVQ assessors and internal verifiers should have the following occupational expertise. **For those standards that are specific to Clinical Laboratory Support.**

The assessors and verifiers should be:

- a state registered scientist in a hospital environment or the equivalent in a non-hospital environment, in both instances having a minimum of two years experience.

The assessors and internal verifiers for Clinical Laboratory Support N/SVQs, should also be or have been working in a clinical laboratory environment.

Evidence of the current occupational competence of assessors and internal verifiers would need to be presented in the form of:

- a certificate of the relevant professional qualification, and
- appropriate assessor/verifier awards, and
- have evidence of current employment in a clinical laboratory environment with Clinical Laboratory Support staff and having worked in that environment for at least two years, and
- demonstrable commitment to maintaining an appropriate level of occupational competence.

The occupational requirements for assessors of the unit imported from Customer Service will be accepted ie they do not have to be assessed by individuals with Clinical Laboratory qualifications. However, those assessing this unit must meet the customer service assessor requirements.

External verifiers will ideally be working senior scientists with a minimum of two years experience at that level or have current knowledge in the last 2-3 years; they are likely to be drawn from experienced internal verifiers. The rationale for these requirements is to ensure that the N/SVQs are only verified by people who are occupationally competent in Clinical Laboratory Support.

In the implementation phase of the award it is recognised that as this is a new qualification and these criteria may restrict the number of suitable external verifier applicants coming forward. Therefore, as an interim measure, in the first stages of implementation only; experienced qualified EVs may be used, and clinical scientific experience is seen as desirable but not essential.

The Standards Setting Body plans to work with the awarding bodies to evaluate the effectiveness of these occupational competence requirements and subject them to review as part of the overall management programme for the qualifications.

Qualification structure

Mandatory units – the candidate must achieve all of these units		Optional units – the candidate must achieve two of these units	
Unit 1	Maintain health and safety in the clinical laboratory environment	Unit 6	Store, maintain and supply working stocks of reagents and consumables
Element 1.1	Monitor and maintain health, safety and security in a clinical laboratory	Element 6.1	Receive and store stocks of reagents and consumables
Element 1.2	Maintain good standards of health and safety for self and others	Element 6.2	Maintain and supply stocks of reagents and consumables
Unit 2	Maintain effective work and working relationships	Unit 7	Prepare solutions for use in the laboratory
Element 2.1	Maintain effective work and develop yourself to improve your performance	Element 7.1	Measure mass and volume of materials
Element 2.2	Establish and maintain effective working relationships with others	Element 7.2	Prepare solutions
Unit 3	Maintain laboratory information and communications	Unit 8	Assist with the routine maintenance and use of clinical laboratory equipment
Element 3.1	Obtain and supply information	Element 8.1	Carry out the routine maintenance of clinical laboratory equipment
Element 3.2	Record laboratory information	Element 8.2	Prepare, monitor and use clinical laboratory equipment
Element 3.3	Maintain communications	Unit 9	Perform manual laboratory techniques
Unit 4	Receive, sort, store and transport specimens	Element 9.1	Prepare for manual laboratory techniques
Element 4.1	Receive specimens	Element 9.2	Carry out manual laboratory techniques
Element 4.2	Handle, sort, store and transport specimens	Unit 10	Assist with the processing of specimens using automated laboratory techniques
Unit 5	Assist with the preparation of specimens	Element 10.1	Perform start up and shut down procedures
Element 5.1	Make the work area and equipment ready for specimen preparation	Element 10.2	Maintain sample throughput
Element 5.2	Carry out routine specimen preparation	Customer Service Unit 1	Give customers a positive impression of yourself and your organisation
		Element 1.1	Establish effective relationships with customers
		Element 1.2	Respond appropriately to customers
		Element 1.3	Communicate information to customers

Methods of achieving external quality control of assessment

The Standards Setting Body in partnership with sector stakeholders and its awarding body partners considered the other forms of independent assessment which are available. These were rejected for the following reasons:

- *The candidate takes a centrally determined and centrally assessed test or assignment*

This involves the use of a test or assignment determined by the awarding bodies centrally which is then locally delivered and centrally assessed. Reasons for **not** using this form

- a practicality (different disciplines are involved, each of which employs different working practices)
- b cost to establish and maintain

- *The candidate takes a centrally set, locally assessed and externally verified test or assignment*

This involves the use of a test or assignment again determined by the Awarding Bodies centrally which is then locally delivered and locally assessed and externally moderated. Reasons for **not** using this form

- a cost, as Clinical Laboratory Support staff are scattered across a large number of varying sized laboratories
- b practicality of delivery

- *The candidate visits an independent centre or location where some part of the assessment is carried out*

Reasons for **not** using this form

- a practicality – most Clinical Laboratory Support staff are scattered across a large number of varying sized laboratories but develop their knowledge and understanding in-house rather than at education centres and colleges or by distance learning courses. The approach does not therefore lend itself to candidates visiting an independent centre
- b cost – the addition of independent centres and moving candidates to other locations would increase costs

- *Part of the candidate's assessment is carried out by a visiting assessor independent of the candidate's registered centre*

Reasons for **not** using this form

- a cost as Clinical Laboratory Support staff are scattered across a large number of varying sized laboratories
- b issues of access as this model might be seen as a means of assessing more than the competence of Clinical Laboratory Support staff.

Annex 1

Key skills level 2 mapping

Unit	1	2	3	4	5	6	7	8	9	10	1	
Communication												
C2.1a: Contribute to a discussion about a straightforward subject.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
C2.1b: Give a short talk about a straight forward subject, using an image.												
C2.2: Read and summarise information from two extended documents about a straightforward subject. One of the documents should include at least one image.	✓			✓		✓	✓	✓	✓	✓		
C2.3: Write two different types of documents about straightforward subjects. One piece of writing should be an extended documents and include at least one image.	✓											
Application of number												
N2.1: Interpret information from two different sources, including material containing a graph							✓					
N2.2: Carry out calculations to do with: a amounts and sizes b scales and proportion c handling statistics d using formulae.							✓					
N2.3: Interpret results of your calculations and present your findings. You must use at least one graph, one chart and one diagram.							✓					
Information technology												
IT2.1: Search for and select information required for two different purposes.			✓									
IT2.2: Explore and develop information, and derive new information, for two different purposes.			✓									

Unit	1	2	3	4	5	6	7	8	9	10	1	
IT2.3: Present combined information for two different purposes. Your work must include at least one example of text, one example of images and one example of numbers.			✓									
Working with others												
WO2.1: Plan the activity with others, identifying objectives and helping to allocate responsibilities and confirm working arrangements.	✓	✓			✓	✓		✓		✓	✓	
WO2.2: Work with others towards achieving the identified objectives, organising tasks to meet your responsibilities, and support co-operative working.	✓	✓			✓	✓		✓		✓	✓	
WO2.3: Exchange information on progress and agree ways of improving work with others to help achieve objectives.	✓	✓			✓	✓		✓		✓	✓	
Improving own learning and performance												
LP2.1: Help set targets with an appropriate person and plan how these will be met.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
LP2.2: Using plans, identifying support from others to help meet your targets, and take responsibility for some decisions about your learning.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
LP2.3: Review progress with an appropriate person and provide examples of evidence of your achievements.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Problem solving												
PS2.1: Identify the problem and come up with at least two options for solving it.		✓					✓		✓	✓	✓	
PS2.2: Plan and try out at least one option for solving the problem, obtaining support and making changes to your plan when necessary.		✓					✓		✓	✓	✓	
PS2.3: Apply given methods to check whether the problem has been solved and describe results and explain your approach, including your approach to problem solving.		✓					✓		✓	✓	✓	

Annex 2

Wider curriculum mapping

	Environmental	Ethical	Moral	Spiritual	Social	Health & Safety	European	Cultural	Sustainable Development
Unit 1: Maintain health and safety in the clinical laboratory environment	✓	✓	✓		✓	✓	✓		
Unit 2: Maintain effective work and working relationships		✓	✓		✓			✓	
Unit 3: Maintain laboratory information and communications									
Unit 4: Receive, sort, store and transport specimens	✓	✓		✓		✓	✓		✓
Unit 5: Assist with the preparation of specimens	✓	✓		✓		✓	✓		✓
Unit 6: Store, maintain and supply working stocks of reagents and consumables	✓					✓	✓		✓
Unit 7: Prepare solutions for use in the laboratory						✓			
Unit 8: Assist with the routine maintenance and use of clinical laboratory equipment						✓			
Unit 9: Perform manual laboratory techniques	✓					✓			✓
Unit 10: Assist with the processing of specimens using automated laboratory techniques	✓					✓			✓
Customer Service Unit 1: Give customers a positive impression of yourself and your organisation		✓	✓	✓	✓			✓	

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