

Specification

BTEC Entry 3, Level 1

Edexcel BTEC Entry Level Award in Land-based Studies
(Entry 3) (QCF)

Edexcel BTEC Entry Level Award in Care of Farm Animals
(Entry 3) (QCF)

Edexcel BTEC Level 1 Award/Certificate/Diploma in
Land-based Studies (QCF)

Edexcel BTEC Level 1 Award in Preparation and Operation of
a Tractor (QCF)

Issue 3

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| This specification is Issue 3. Key changes are sidlined. We will inform centres of any changes to this issue. The latest issue can be found on the Edexcel website: www.edexcel.com

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Qualification titles covered by this specification

Edexcel BTEC Entry Level Award in Land-based Studies (Entry 3) (QCF)

Edexcel BTEC Entry Level Award in Care of Farm Animals (Entry 3) (QCF)

Edexcel BTEC Level 1 Award in Land-based Studies (QCF)

Edexcel BTEC Level 1 Award in Preparation and Operation of a Tractor (QCF)

Edexcel BTEC Level 1 Certificate in Land-based Studies (QCF)

Edexcel BTEC Level 1 Diploma in Land-based Studies (QCF)

These qualifications have been accredited to the Qualifications and Credit Framework (QCF) and are eligible for public funding as determined by the Department for Children, Schools and Families (DCSF) under Sections 96 and 97 of the Learning and Skills Act 2000.

The qualification titles listed above feature in the funding lists published annually by the DCSF and the regularly updated website www.dcsf.gov.uk/. The QCF Qualification Accreditation Number (QAN) should be used by centres when they wish to seek public funding for their learners. Each unit within a qualification will also have a QCF unit code.

The QCF qualification and unit codes will appear on learners' final certification documentation.

The QANs for the qualifications in this publication are:

Edexcel BTEC Entry Level Award in Land-based Studies (Entry 3) (QCF)	500/6595/6
Edexcel BTEC Entry Level Award in Care of Farm Animals (Entry 3) (QCF)	500/6338/8
Edexcel BTEC Level 1 Award in Land-based Studies (QCF)	500/6594/4
Edexcel BTEC Level 1 Award in Preparation and Operation of a Tractor (QCF)	500/6596/8
Edexcel BTEC Level 1 Certificate in Land-based Studies (QCF)	500/6593/2
Edexcel BTEC Level 1 Diploma in Land-based Studies (QCF)	500/6701/1

These qualification titles will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel.

What are BTEC Entry 3 and Level 1 qualifications?

BTEC Entry 3 and Level 1 qualifications are designed to enhance learners' work and life skills in a range of vocational contexts. They are appropriate for a diverse range of learners including:

- 14-19 year-old learners
- adults returning to study
- those seeking to develop greater independence
- those who have not yet achieved accredited qualifications
- those with specific learning needs.

The intended destinations for learners successfully achieving these qualifications include:

- GCSEs and/or A Levels
- Diplomas
- apprenticeships
- supported employment
- independent living.

BTEC Entry 3 and Level 1 qualifications provide some of the underpinning knowledge and understanding for the National Occupational Standards for the sector, where these are appropriate. They are supported by the relevant Standards Setting Body (SSB) or Sector Skills Council (SSC). They attract achievement and attainment points that equate to similar-sized general qualifications.

Key features of the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) suite of Land-based Studies qualifications

These qualifications have been developed to give learners the opportunity to:

- engage in learning which is relevant to them and will provide opportunities to develop a range of skills and techniques, personal skills and attributes essential for successful performance in working life
- achieve a nationally recognised Entry or Level 1 vocationally related qualification
- progress to employment in the land-based sector
- progress to related vocational qualifications.

National Occupational Standards

Where relevant, Edexcel BTEC Level 1 (QCF) qualifications are designed to provide some of the underpinning knowledge and understanding for the National Occupational Studies (NOS), as well as developing practical skills in preparation for work and possible achievement of NVQs in due course. NOS form the basis of National Vocational Qualifications (NVQs). Edexcel BTEC Level 1 (QCF) qualifications do not purport to deliver occupational competence in the sector, which should be demonstrated in a work context.

Each unit in the specification identifies links to elements of the NOS.

The Edexcel BTEC Level 1 Award/Certificate/Diploma in Land-based Studies relates to the following NOS:

- the National Occupational Standards for Agriculture
- the National Occupational Standards for Animal Care
- the National Occupational Standards for Horticulture
- the National Occupational Standards for Introductory Horse Care.

Rules of combination

The rules of combination specify the credits that need to be achieved, through the completion of particular units, for the qualification to be awarded. All accredited qualifications within the QCF have a set rule of combination.

The rules of combination specify the:

- credit value of the qualification which sets out the number of credits required at all levels to achieve the qualification
- the credits to be achieved at the level of the qualification or above
- credits from mandatory units, where relevant
- credits from optional units, where relevant
- credits from other units
- credits from equivalent units
- exemptions
- time limits on the process of credit accumulation or exemptions.

Rules of combination for the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications

When combining units for an Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF), it is the centre's responsibility to ensure that the following rules of combination are adhered to.

Edexcel BTEC Entry Level Award in Land-based Studies (Entry 3) (QCF)

- 1 Qualification credit value: a minimum of 6 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 4 credits.
- 3 All credits must be achieved from the units listed on page 6.

Edexcel BTEC Entry Level Award in Care of Farm Animals (Entry 3) (QCF)

- 1 Qualification credit value: 6 credits.
- 2 All credits must be achieved from the single unit listed on page 6.

Edexcel BTEC Level 1 Award in Land-based Studies (QCF)

- 1 Qualification credit value: a minimum of 7 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 4 credits.
- 3 All credits must be achieved from the units listed in the table on pages 7 and 8.

Edexcel BTEC Level 1 Award in Preparation and Operation of a Tractor (QCF)

- 1 Qualification credit value: 7 credits.
- 2 All credits must be achieved from the single unit listed on page 8.

Edexcel BTEC Level 1 Certificate in Land-based Studies (QCF)

- 1 Qualification credit value: a minimum of 13 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 7 credits.
- 3 All credits must be achieved from the units listed in the table on pages 9 and 10.

Edexcel BTEC Level 1 Diploma in Land-based Studies (QCF)

- 1 Qualification credit value: a minimum of 37 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 19 credits.
- 3 All credits must be achieved from the units listed in the table on pages 9 and 10.

**Edexcel BTEC Entry Level Award in Land-based Studies (Entry 3)
(QCF) units**

Unit number	Unit title	Credit	Level
1	Developing Practical Skills for Maintaining Plants	3	E3
2	Horticulture: Plant Flower Bulbs for Naturalisation or Bedding	3	E3
3	Understanding Soils	3	E3
4	Horticulture: Introduction to Pruning Trees and Shrubs	3	E3
5	Horticulture: Introduction to Ground Preparation	3	E3
6	Check that a Small Animal is Healthy	3	E3
7	Assist with Catching and Restraining a Small Animal	2	E3
8	Groom a Small Animal	2	E3
9	Preparing for an Interview	1	E3
10	Interview Skills	1	E3
11	Managing your Health at Work	1	E3
12	Working Towards Goals	2	1
13	Working as Part of a Group	2	1

**Edexcel BTEC Entry Level Award in Care of Farm Animals (Entry 3)
(QCF) units**

Unit number	Unit title	Credit	Level
14	Care of Farm Animals	6	E3

Edexcel BTEC Level 1 Award in Land-based Studies (QCF) units

Unit number	Unit title	Credit	Level
1	Developing Practical Skills for Maintaining Plants	3	E3
2	Horticulture: Plant Flower Bulbs for Naturalisation or Bedding	3	E3
3	Understanding Soils	3	E3
4	Horticulture: Introduction to Pruning Trees and Shrubs	3	E3
5	Horticulture: Introduction to Ground Preparation	3	E3
6	Check that a Small Animal is Healthy	3	E3
7	Assist with Catching and Restraining a Small Animal	2	E3
8	Groom a Small Animal	2	E3
15	Maintain the Safety of Self and Others in the Workplace	4	1
16	Assist with the Maintenance of Equipment	3	1
17	Assist with the Care of Animals	2	1
18	Assist with the Movement of Animals	2	1
19	Assist with Preparing and Maintaining Livestock Accommodation	2	1
20	Assist with Preparation and the Monitoring of Livestock Outdoors	2	1
21	Farm Animal Health	4	1
22	Assist with Feedstuffs for Small Animals	2	1
23	Assist with Animal Accommodation	2	1
24	Assist with the Movement and Handling of Small Animals	1	1
25	Assist with the Maintenance of Grass Surfaces	3	1
26	Soil Identification and Testing	4	1
27	Assist with Planting and Establishing Plants	3	1
28	Assist with Maintaining Plants	4	1
29	Assist with the Vegetative Propagation of Plants	3	1
30	Assist with the Propagation of Plants from Seed	2	1
31	Assist with Identifying the Presence of, and Controlling Common Pests and Diseases	2	1
32	Prepare and Plant a Container for Display	3	1
33	Planting and Staking a Tree	2	1
34	Assist with Feeding and Watering Horses	2	1
35	Assist with the Preparation for Exercise and Aftercare of Horses	6	1
36	Maintain the Health of Horses	6	1

Unit number	Unit title	Credit	Level
37	Working in a Team	3	2
38	Self-Management Skills	2	2
39	Preparing for an Interview	1	2
40	Interview Skills	1	2
42	Sport Fisheries	7	1
43	Water and Fish	7	1

Edexcel BTEC Level 1 Award in Preparation and Operation of a Tractor (QCF) units

Unit number	Unit title	Credit	Level
41	Assist with the Basic Preparation and Operation of a Tractor	7	1

Edexcel BTEC Level 1 Certificate and Diploma in Land-based Studies (QCF) units

Unit number	Unit title	Credit	Level
1	Developing Practical Skills for Maintaining Plants	3	E3
2	Horticulture: Plant Flower Bulbs for Naturalisation or Bedding	3	E3
3	Understanding Soils	3	E3
4	Horticulture: Introduction to Pruning Trees and Shrubs	3	E3
5	Horticulture: Introduction to Ground Preparation	3	E3
6	Check that a Small Animal is Healthy	3	E3
7	Assist with Catching and Restraining a Small Animal	2	E3
8	Groom a Small Animal	2	E3
14	Care of Farm Animals	6	E3
15	Maintain the Safety of Self and Others in the Workplace	4	1
16	Assist with the Maintenance of Equipment	3	1
17	Assist with the Care of Animals	2	1
18	Assist with the Movement of Animals	2	1
19	Assist with Preparing and Maintaining Livestock Accommodation	2	1
20	Assist with Preparation and the Monitoring of Livestock Outdoors	2	1
21	Farm Animal Health	4	1
22	Assist with Feedstuffs for Small Animals	2	1
23	Assist with Animal Accommodation	2	1
24	Assist with the Movement and Handling of Small Animals	1	1
25	Assist with the Maintenance of Grass Surfaces	3	1
26	Soil Identification and Testing	4	1
27	Assist with Planting and Establishing Plants	3	1
28	Assist with Maintaining Plants	4	1
29	Assist with the Vegetative Propagation of Plants	3	1
30	Assist with the Propagation of Plants from Seed	2	1
31	Assist with Identifying the Presence of, and Controlling Common Pests and Diseases	2	1
32	Prepare and Plant a Container for Display	3	1
33	Planting and Staking a Tree	2	1
34	Assist with Feeding and Watering Horses	2	1

Unit number	Unit title	Credit	Level
35	Assist with the Preparation for Exercise and Aftercare of Horses	6	1
36	Maintain the Health of Horses	6	1
37	Working in a Team	3	2
38	Self-Management Skills	2	2
39	Preparing for an Interview	1	2
40	Interview Skills	1	2
41	Assist with the Basic Preparation and Operation of a Tractor	7	1
42	Sport Fisheries	7	1
43	Water and Fish	7	1

Assessment

In the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications all units are internally assessed. The qualifications are criterion referenced, based on the achievement of all the specified learning outcomes.

Each unit within the qualification has specified assessment criteria which must be used. To achieve a 'pass' a learner must have satisfied **all** the assessment criteria.

Guidance

The purpose of assessment is to ensure that effective learning has taken place to give learners the opportunity to:

- meet the standard determined by the assessment criteria

and

- achieve the learning outcomes.

All the assignments created by centres should be reliable and fit for purpose, and should be built on the unit assessment criteria. Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the specified criteria. Centres should enable learners to produce evidence in a variety of different forms including performance observation, presentations, posters, along with projects, or time-constrained assessments.

Centres are encouraged to emphasise the practical application of the assessment criteria, providing a realistic scenario for learners to adopt, and making maximum use of practical activities. The creation of assignments that are fit for purpose is vital to achievement and their importance cannot be over-emphasised.

The assessment criteria must be clearly indicated on the assignments. This gives learners focus and helps with internal verification and standardisation processes. It will also help to ensure that learner feedback is specific to the assessment criteria.

When designing assignments, centres are encouraged to identify common topics and themes. A central feature of vocational assessment is that it allows for assessment to be:

- current, ie to reflect the most recent developments and issues
- local, ie to reflect the employment context of the delivering centre
- flexible to reflect learner needs, ie at a time and in a way that matches the learner's requirements so that they can demonstrate achievement.

Qualification grade

Learners who achieve the minimum eligible credit value specified by the rule of combination will achieve the qualification at pass grade (see the *Rules of combination for the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications*).

In the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications each unit has a credit value which specifies the number of credits that will be awarded to a learner who has achieved the learning outcomes of the unit. This has been based on:

- one credit for those learning outcomes achievable in 10 hours of learning
- learning time being defined as the time taken by learners at the level of the unit, on average, to complete the learning outcomes of the unit to the standard determined by the assessment criteria
- the credit value of the unit remaining constant regardless of the method of assessment used or the qualification to which it contributes

‘Credit is awarded for achievement, not for learning effort. This measure of learning time does not determine the time actually taken by any individual learner; the real time varies and is influenced by factors such as the individual’s learning style and prior learning. It is important to emphasise that learning time is not the amount of time served, for example the number of hours a learner rehearses for a performance or the number of hours a learner spends training in the workplace. Nor is learning time the hours that a learner attends a course or the sum of hours of actual participation in learning activities.’

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Centres are advised to consider this definition when planning the programme of study associated with this specification.

Quality assurance of centres

Edexcel’s qualification specifications clearly set out the standard to be achieved by each learner in order to achieve the award of the qualification. This is given in the statement of learning outcomes and assessment criteria in each unit. Further guidance on assessment is given in the *Essential guidance for tutors* section of each unit.

Edexcel operates a quality assurance process, which is designed to ensure that these standards are maintained by all assessors and verifiers.

These qualifications provide a flexible structure for learners enabling programmes of varying credits and combining different levels. For the purposes of quality assurance all individual qualifications and units are considered as a whole. Centres delivering these qualifications must be committed to ensuring the quality of the units and qualifications they deliver, through effective standardisation of assessors and verification of assessor decisions. Centre quality assurance and assessment is monitored and guaranteed by Edexcel.

The Edexcel quality assurance processes will involve:

- centre approval for those centres not already recognised as a centre for BTEC qualifications
- **compulsory** Edexcel-provided training and standardisation for lead internal verifiers
- centre risk assessment by Edexcel of overarching processes and quality standards (this would usually be via self-assessment, but will include visits on occasions)
- remedial training and/or assessment sampling for centres identified, through standardisation or risk assessment activities, as having inadequate quality, assessment or internal verification processes
- programmed sampling of internal verification and assessor decisions.

Centres are required to declare their commitment to ensuring quality and appropriate assessment opportunities for learners that lead to valid and accurate assessment outcomes. In addition, centres will commit to undertaking defined training and online standardisation activities. Centres already holding BTEC approval are able to gain qualification approval online. New centres must complete a centre approval application.

Edexcel Quality Assurance handbook

Details of quality assurance are set out in the Edexcel Quality Assurance handbook published annually. Edexcel's qualification specifications set out the standard to be achieved by each learner in order to be awarded the qualification. This is covered in the statement of learning outcomes and grading criteria in each unit. Further guidance on delivery and assessment is given in the *Essential guidance for tutors* section in each unit. This section is designed to provide additional guidance and amplification related to the unit to support tutors, deliverers and assessors and to provide for a coherence of understanding and a consistency of delivery and assessment.

Approval

Centres that have not previously offered BTEC qualifications will first need to apply for, and be granted, centre approval before they can apply for approval to offer the programme.

When a centre applies for approval to offer a BTEC qualification they are required to enter into an approvals agreement.

The approvals agreement is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and any linked codes or regulations. Sanctions and tariffs may be applied if centres do not comply with the agreement. Ultimately, this could result in the suspension of certification or withdrawal of approval.

Centres will be allowed 'accelerated approval' for a new programme where the centre already has approval for a programme that is being replaced by the new programme.

The key principles of quality assurance are that:

- a centre delivering BTEC programmes must be an approved centre and must have approval for programmes or groups of programmes that it is operating
- the centre agrees as part of gaining approval to abide by specific terms and conditions around the effective delivery and quality assurance of assessment; it must abide by these conditions throughout the period of delivery
- Edexcel makes available to approved centres a range of materials and opportunities intended to exemplify the processes required for effective assessment and examples of effective standards. Approved centres must use the materials and services to ensure that all staff delivering BTEC qualifications keep up to date with the guidance on assessment
- an approved centre must follow agreed protocols for standardisation of assessors and verifiers; planning, monitoring and recording of assessment processes; and for dealing with special circumstances, appeals and malpractice.

Programme design and delivery

Mode of delivery

Edexcel does not define the mode of delivery for Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications. Centres are free to offer the qualifications using any mode of delivery (such as full-time, part-time, evening only, distance learning) that meets their learner's needs. Whichever mode of delivery is used, centres must ensure that learners have appropriate access to the resources identified in the specification and to the subject specialists delivering the units. This is particularly important for learners studying for the qualification through open or distance learning.

Learners studying for the qualification on a part-time basis bring with them a wealth of experience that should be utilised to maximum effect by tutors and assessors. The use of assessment evidence drawn from learners' work environments should be encouraged. Those planning the programme should aim to enhance the vocational nature of the qualification by:

- liaising with employers to ensure a course relevant to learners' specific needs
- accessing and using non-confidential data and documents from learners' workplaces
- including sponsoring employers in the delivery of the programme and, where appropriate, in the assessment
- linking with company-based/workplace training programmes
- making full use of the variety of experience of work and life that learners bring to the programme.

Resources

Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications are designed to give learners an understanding of the skills needed for specific vocational sectors. Physical resources need to support the delivery of the programme and the assessment of the learning outcomes, and should therefore normally be of industry standard. Staff delivering programmes and conducting the assessments should be familiar with current practice and standards in the sector concerned. Centres will need to meet any specific resource requirements to gain approval from Edexcel.

Where specific resources are required these have been indicated in individual units in the *Essential resources* sections.

Delivery approach

It is important that centres develop an approach to teaching and learning that supports the vocational nature of Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications and the mode of delivery. Specifications give a balance of practical skill development and knowledge requirements, some of which can be theoretical in nature. Tutors and assessors need to ensure that appropriate links are made between theory and practical application and that the knowledge base is applied to the sector. This requires the development of relevant and up-to-date teaching materials that allow learners to apply their learning to actual events and activity within the sector. Maximum use should be made of the learner's experience.

Additional and specialist learning

Additional and specialist learning (ASL) consists of accredited qualifications at the same level as, or one level above the Diploma course of study, which have been approved under Section 96 of the Learning and Skills Act 2000. The ASL may include BTEC qualifications which are also available to learners not following a Diploma course of study.

Qualifications for ASL must be selected from the ASL catalogue through the National Database of Accredited Qualifications (NDAQ). The catalogue includes qualifications which have the approval of the Diploma Development Partnership (DDP) and will expand over time as more qualifications are approved. To access the catalogue go to www.ndaq.org.uk and select 'Browse Diploma Qualifications'.

Further units may be added to qualifications within the catalogue and centres undertaking, or preparing to undertake, ASL should refer regularly to the Edexcel website for information regarding additions.

Functional Skills

Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications give learners opportunities to develop and apply Functional Skills. Functional Skills are also offered as stand-alone qualifications at Entry and Level 1.

Access and recruitment

Edexcel's policy regarding access to its qualifications is that:

- they should be available to everyone who is capable of reaching the required standards
- they should be free from any barriers that restrict access and progression
- there should be equal opportunities for all wishing to access the qualifications.

Centres are required to recruit learners to BTEC qualifications with integrity. This will include ensuring that applicants have appropriate information and advice about the qualifications and that the qualification will meet their needs. Centres should take appropriate steps to assess each applicant's potential and make a professional judgement about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should consult Edexcel's policy on learners with particular requirements.

Centres will need to review the entry profile of qualifications and/or experience held by applicants, considering whether this profile shows an ability to progress to a higher level qualification.

Restrictions on learner entry

The Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) in Land-based Studies, the Edexcel BTEC Entry Level Award in Care of Farm Animals (Entry 3) (QCF) and the Edexcel BTEC Level 1 Award in Preparation and Operation of a Tractor (QCF) are accredited on the QCF for learners aged 14 and above.

In particular sectors the restrictions on learner entry might also relate to any physical or legal barriers, for example people working in health, care or education are likely to be subject to police checks.

Access arrangements and special considerations

Edexcel's policy on access arrangements and special considerations for BTEC and Edexcel NVQ qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the 1995 Disability Discrimination Act and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or competence.

Further details are given in the policy document *Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications*, which can be found on the Edexcel website (www.edexcel.com). This policy replaces the previous Edexcel policy (Assessment of Vocationally Related Qualification: Regulations and Guidance Relating to Learners with Special Requirements, 2002) concerning learners with particular requirements.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is a method of assessment (leading to the award of credit) that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and so do not need to develop through a course of learning.

Edexcel encourages centres to recognise learners' previous achievements and experiences whether at work, home and at leisure, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning.

RPL enables recognition of achievement from a range of activities using any valid assessment methodology. Provided that the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification. Evidence of learning must be sufficient, reliable and valid.

Unit format

All units in the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications have a standard format. The unit format is designed to give guidance on the requirements of the qualification for learners, tutors, assessors and those responsible for monitoring national standards.

Each unit has the following sections.

Unit title

The unit title is accredited on the QCF and this form of words will appear on the learner's Notification of Performance (NOP).

QCF level

All units and qualifications within the QCF will have a level assigned to them, which represents the level of achievement. There are nine levels of achievement, from Entry Level to Level 8. The level of the unit has been informed by the QCF level descriptors and, where appropriate, the NOS and/or other sector/professional benchmarks.

Credit value

All units have a credit value. The minimum credit value that may be determined for a unit is one, and credits can only be awarded in whole numbers. Learners will be awarded credits for the successful completion of whole units.

Unit aim

The aim provides a clear summary of the purpose of the unit and is a succinct statement that summarises the learning outcomes of the unit.

Unit introduction

The unit introduction gives the reader an appreciation of the unit in the vocational setting of the qualification, as well as highlighting the focus of the unit. It gives the reader a snapshot of the unit and the key knowledge, skills and understanding gained while studying the unit. The unit introduction also highlights any links to the appropriate vocational sector by describing how the unit relates to that sector.

Learning outcomes

The learning outcomes of a unit set out what a learner is expected to know, understand or be able to do as the result of a process of learning.

Assessment criteria

The assessment criteria of a unit specify the standard a learner is expected to meet to demonstrate that a learning outcome, or set of learning outcomes, has been achieved. The learning outcomes and assessment criteria clearly articulate the learning achievement for which the credit will be awarded at the level assigned to the unit.

Unit content

The unit content identifies the breadth of knowledge, skills and understanding needed to design and deliver a programme of learning to achieve each of the learning outcomes. This is informed by the underpinning knowledge and understanding requirements of the related National Occupational Standards (NOS), where relevant. The content provides the range of subject material for the programme of learning and specifies the skills, knowledge and understanding required for achievement of the unit.

Each learning outcome is stated in full and then the key phrases or concepts related to that learning outcome are listed in italics followed by the subsequent range of related topics.

Relationship between content and assessment criteria

The learner should have the opportunity to cover all of the unit content.

It is not a requirement of the unit specification that all of the content is assessed. However, the indicative content will need to be covered in a programme of learning in order for learners to be able to meet the standard determined in the assessment criteria.

Content structure and terminology

The information below shows the unit content is structured and gives the terminology used to explain the different components within the content.

- Learning outcome: this is shown in bold at the beginning of each section of content.
- Italicised sub-heading: it contains a key phrase or concept. This is content which must be covered in the delivery of the unit. Colons mark the end of an italicised sub-heading.
- Elements of content: the elements are in plain text and amplify the sub-heading. The elements must be covered in the delivery of the unit. Semi-colons mark the end of an element.
- Brackets contain amplification of content which must be covered in the delivery of the unit.
- ‘eg’ is a list of examples, used for indicative amplification of an element (that is, the content specified in this amplification could be covered or could be replaced by other, similar material).

Essential guidance for tutors

This section gives tutors additional guidance and amplification to aid understanding and a consistent level of delivery and assessment. It is divided into the following sections.

- *Delivery* – explains the content’s relationship with the learning outcomes and offers guidance about possible approaches to delivery. This section is based on the more usual delivery modes but is not intended to rule out alternative approaches.
- *Outline learning plan* – an outline learning plan is included in each unit and provides an indication of the learning time taken by the average learner to achieve the learning outcomes at the standard determined by the assessment criteria.
- *Assessment* – gives amplification about the nature and type of evidence that learners need to produce in order to achieve the unit. This section should be read in conjunction with the assessment criteria.
- *Essential resources* – identifies any specialist resources needed to allow learners to generate the evidence required for each unit. The centre will be asked to ensure that any requirements are in place when it seeks approval from Edexcel to offer the qualification.
- *Indicative resource materials* – provides resource materials that may be of value when preparing for the delivery of the qualifications.

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Unit 1: **Developing Practical Skills for Maintaining Plants**

Unit code: R/502/4550

QCF Level: Entry 3

Credit value: 3

Unit aim

This unit aims to give learners an introduction to the skills required to maintain existing plants. Learners will undertake simple pruning tasks on a variety of plant material, and will weed, mulch and edge established beds and borders.

Unit introduction

This unit introduces learners to the tools and equipment used in plant maintenance operations. The emphasis is on the correct selection and safe use of these tools and equipment.

Learners will be given the opportunity to practise deadheading, weeding, mulching and edging of established beds and borders within an acceptable timescale.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members by contributing to the maintenance of beds and borders and keeping the working area safe and tidy. This unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Know the correct tools and equipment needed to safely carry out plant maintenance operations</p>	<p>1.1 Select the correct tools and equipment used to undertake specific plant maintenance operations</p> <p>1.2 Assist with completing a simple risk assessment</p> <p>1.3 Maintain a safe and tidy working environment</p> <p>1.4 Clean and correctly store tools and equipment used in plant maintenance</p>
<p>2 Be able to correctly deadhead plants</p>	<p>2.1 Assist with the deadheading of a variety of plant material</p>
<p>3 Be able to correctly weed, mulch and edge established beds and borders</p>	<p>3.1 Carry out weed removal from established beds and borders</p> <p>3.2 Spread mulch to the specified density on beds and borders</p> <p>3.3 Edge a bed or border to a specified standard</p>

Unit content

1 **Know the correct tools and equipment needed to safely carry out plant maintenance operations**

Tools and equipment: types and uses of eg secateurs, edging shears, half moon, spade, shovel, fork, draw hoe, Dutch hoe, rake, wheelbarrow, gardening gloves; methods used to clean and store correctly after use

Safely carry out: simple risk assessment forms; reason for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

2 **Be able to correctly deadhead plants**

Deadhead: reasons for deadheading eg remove faded and dead flowers, encourage further flowering; angled cuts above a node without leaving excessive stems to die back

Plants: shrubs, herbaceous perennials, bedding plants and bulbs

3 **Be able to correctly weed, mulch and edge established beds and borders**

Weed: methods of hoeing annual weeds and seedlings; methods of digging out and removing perennial weeds

Mulch: reasons for mulching; materials used; methods of ensuring even thickness and density over area; reasons why mulch must not be left on top of or touching plant material

Edge: methods of cutting back long grass, re-cutting bed

Essential guidance for tutors

Delivery

This unit is intended to give learners their first experience of the basic plant maintenance skills needed to keep established borders at full flowering potential, together with the background knowledge required to underpin these practical skills. Learners must have opportunities to develop their knowledge and practical skills through the use of supervised classroom and outdoor activities, group teaching, and demonstrations of the equipment and techniques involved.

For all practical tasks being undertaken, emphasis must be placed on safe and effective working practices. Use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help the learner improve their social and problem-solving skills.

Use of all tools listed in the *Unit content* should be encouraged, although a Dutch hoe and a draw hoe provide similar results if only one is available. Also, depending on how well maintained the beds are, half-moon edger or edging shears can be used.

Tutors should demonstrate the knowledge, skills and techniques associated with weeding and pruning various plant material and mulching established planting, and learners must practise all these techniques.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Know the correct tools equipment to safely carry out plant maintenance operations</p> <p>Learners to be shown the tools and equipment. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners to work individually on tool and equipment identification sheets. Videos or presentations can be shown on relevant health and safety issues. Learners can contribute to a group risk assessment or fill out simple risk assessment sheets individually. Learners to put away, clean and store tools after practical sessions. Tutor-led discussion on why this is an important part of the job.</p>
<p>Know the correct tools and equipment needed to safely carry out plant maintenance operations</p> <p><i>Assessment:</i> Identification test with tools and equipment laid out and numbered. Learners to have a sheet with pictures/names of tools on it and match number to picture/name. Or learners could, as individuals, prepare a presentation showing their understanding and identification of plant maintenance tools and equipment.</p>

Topic and suggested assignments/activities
<p>Be able to correctly deadhead a variety of plant material</p> <p>Tutors could verbally explain and demonstrate correct practice across a variety of plant material. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p>
<p>Be able to correctly deadhead a variety of plant material</p> <p><i>Assessment:</i> This can be evidenced by photographs of learners undertaking deadheading tasks. Or learners could keep a diary of tasks they have carried out, this can take the form of pictures with notes or as mind-maps. To accompany this, the tutor could complete a marking sheet that shows the specific outcomes that have been achieved.</p>
<p>Be able to correctly weed, mulch and edge established beds and borders</p> <p><i>Weeding:</i> Tutors could explain why weeding is important in established beds and borders. Learners could research and list perennial and annual weeds that are commonly found in gardens. A demonstration on the use of a Dutch hoe and draw hoe should be shown, also the method for removing perennial weeds. This could be followed by learners practising.</p> <p><i>Mulching:</i> Tutors could verbally explain the task of mulching, using group discussion to ensure the reasons for using mulches are understood. An example of a completed task could be shown. This could be followed by learners practising.</p> <p><i>Edging:</i> Tutors could demonstrate the use of the correct tools, either edging shears or half-moon edger. This could be followed by learners practising. On all tasks the tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p>
<p>Be able to correctly weed, mulch and edge established beds and borders</p> <p><i>Assessment:</i> This can be evidenced by photographs of learners undertaking weeding, mulching and edging tasks. Or learners could keep a diary of tasks they have carried out, in the form of pictures with notes or mind-maps. To accompany this, the tutor could complete a marking sheet that shows the specific outcomes achieved.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Many criteria will need to be assessed directly by the tutor during practical maintenance activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. However, some of the criteria may be assessed through the correct completion of forms or paperwork. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit for assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must select the correct tools and equipment required for at least two specific plant maintenance operations, such as weeding or pruning.

To achieve 1.2, learners must be able to assist with the completion of a simple risk assessment relating to a plant maintenance activity.

To achieve 1.3, learners must demonstrate that they can maintain a safe and tidy working environment. This may be evidenced by a witness statement signed by the tutor.

To achieve 1.4, learners must clean and correctly store at least two different tools or pieces of equipment that they have used.

To achieve 2.1, learners must be able to assist with deadheading at least two different types of plant.

To achieve 3.1, learners must demonstrate the ability to remove weeds from a bed or border.

To achieve 3.2, learners must spread mulch to the density instructed on a bed or border.

To achieve 3.3, learners must create a neat edge to a bed or border, either by clipping with edging shears or by using a half-moon tool.

Essential resources

The minimum requirement needed to deliver this unit is an area of well-established planting. It should contain a range of shrubs, herbaceous perennials, bulbs and annual bedding. Each learner should have access to enough established plant material to enable them to practise adequately to achieve the assessment standards. An area for storing and cleaning tools is also needed for completion of the assessment criteria.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local gardens. A talk by the head gardener, explaining the importance of good plant and garden maintenance, would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry.

Indicative resource materials

Textbooks

Bird R – *Pruning* (Hamlyn, 2004) ISBN 9780600610243

Hessayon Dr D G – *The Pest and Weed Expert* (Expert Books, 2007) ISBN 9780903505628

Ryrie C – *Soil* (Gaia Books Ltd, 2001) ISBN 9781856751223

Ryrie C – *Weeds* (Gaia Books Ltd, 2001) ISBN 9781856751322

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 2: Horticulture: Plant Flower Bulbs for Naturalisation or Bedding

Unit code: T/600/0140
 QCF Level: Entry 3
 Credit value: 3

Unit aim

This unit introduces the skills required to plant bulbs for naturalisation or for bedding. Learners will undertake the naturalising of bulbs in turf and planted areas.

Unit introduction

This unit introduces learners to the tools and equipment used in naturalising bulbs.

Emphasis is on the correct selection and safe use of the equipment used in bulb planting operations.

Learners will be given the opportunity to practise naturalising bulbs in turf and bedding within an acceptable timescale.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members by contributing to the preparation and planting tasks and keeping the working area safe and tidy. The unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Prepare for tasks	1.1 Select and wear appropriate personal protective clothing, for example gloves, overalls, safety footwear 1.2 Select appropriate tools and equipment for task, for example spade, fork, rake, bulb planter, label, watering can

Learning outcomes	Assessment criteria
<p>2 Plant flower bulbs for naturalisation/bedding</p>	<p>2.1 Use tools and equipment with due regard to health and safety of self and others</p> <p>2.2 Prepare ground/area as instructed</p> <p>2.3 Select appropriate bulbs and check condition as instructed</p> <p>2.4 Handle bulbs appropriately</p> <p>2.5 Plant bulbs at appropriate spacing and depth as instructed</p> <p>2.6 Backfill and firm as instructed</p> <p>2.7 Label area as instructed</p>
<p>3 Tidy work area</p>	<p>3.1 Clean and tidy work area</p> <p>3.2 Dispose of waste material if appropriate</p> <p>3.3 Clean and store tools safely</p>

Unit content

1 Prepare for tasks

PPE: types and uses of eg overalls, gloves, safety boots

Tools: types and uses of eg spade, fork, rake, bulb planter, labels, watering can

2 Plant flower bulbs for naturalisation/bedding

Safety: simple risk assessment forms; reasons for and methods of using tools safely; reasons for and methods of keeping work area free of potential hazards that could cause injuries to the group or others; current, relevant legislation; PPE

Prepare ground: reasons for and methods of correctly preparing the planting area

Select and check bulbs: identification of bulbs for planting; recognition of defects in selected material

Handle correctly: reasons for handling bulbs correctly before planting

Plant bulbs: methods of planting bulbs correctly ensuring adequate spacing and depth

Firm in: reasons for firming in bulbs after planting

Label: reasons for correctly labelling/marketing planting area

3 Tidy work area

Tidy work area: reasons for clearing the work area once job is completed; disposal of debris eg correct disposal of organic and inorganic materials, reasons for composting green waste; cleaning and storage of tools eg spade, fork, rake, bulb planter, labels, watering can; reasons for safe storage of tools and materials

Essential guidance for tutors

Delivery

This unit is intended to give learners their first experience of the basic planting skills needed to establish and naturalise bulbs in turf and bedding schemes, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and bulb planting skills through extensive use of supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

The unit has been designed to provide the basic knowledge and skills needed to naturalise bulbs in turf and bedding. Emphasis must be placed on safe and effective working practices in all practical tasks being carried out. The use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help learners improve their social and problem-solving skills.

The use of all tools listed in the *Unit content* should be encouraged.

Tutors should demonstrate the various techniques and skills needed to naturalise bulbs. Learners must practice all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with naturalising bulb material.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Prepare for tasks</p> <p>Learners shown the tools, equipment and PPE. Tutor-led discussion on uses and safety of all relevant tools, equipment and PPE. Learners work individually on tool and equipment identification sheets. This could take the form of PowerPoint or mind-maps.</p>
<p>Prepare for tasks</p> <p><i>Assessment:</i> Identification test with tools, equipment and PPE laid out and numbered. Learners could have a sheet with pictures/names of tools, equipment and PPE on it, and match number to picture/name. Or learners could, as individuals, compile a presentation showing their understanding and identifying the relevant tools, equipment and PPE.</p>
<p>Plant flower bulbs for naturalisation/bedding</p> <p>Videos or presentations can be shown on relevant health and safety. Learners can contribute to a group risk assessment or fill out simple risk assessment sheets individually. Tutor-led discussion on why adding organic matter is important in soil preparation. Tutors could show the difference between good and bad bulbs and how to handle bulbs correctly before planting. Tutors could verbally explain and demonstrate how to carry out bulb naturalisation techniques correctly. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p>

Topic and suggested assignments/activities
<p>Plant flower bulbs for naturalisation/bedding</p> <p><i>Assessment:</i> This can be evidenced with photographs of learners undertaking ground preparation and bulb planting operations. Or learners could keep a diary of tasks they have carried out, this can take the form of pictures with notes or as mind-maps. To accompany this, the tutor should complete a marking sheet that shows the specific outcomes achieved.</p> <p>If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.</p>
<p>Tidy work area</p> <p>Tutor-led discussion on why the working area must be kept free from hazards during and after the task. Learners shown the difference between organic and inorganic waste materials. Tutor-led discussion on why it is important to compost organic waste. Tutor-led discussion on why it is important to clean and store tools, equipment and PPE correctly and safely.</p>
<p>Tidy work area</p> <p>Learners could, as individuals, compile a presentation showing their understanding of why it is important to keep an area tidy, dispose of waste correctly and store tools, equipment and PPE away in a clean and safe condition.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Many criteria will need to be assessed directly by the tutor during practical bulb planting activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. However, some of the criteria may be assessed by the correct completion of forms or paperwork. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must select and wear at least two pieces of PPE relating to bulb planting activities.

To achieve 1.2, learners must be able to identify and correctly select at least two tools or pieces of equipment related to bulb planting operations.

To achieve 2.1, learners must show the ability to work safely with all the tools needed for naturalising bulbs. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.2, learners must prepare the planting area correctly and add organic matter to aid establishment. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.3, learners must select appropriate bulbs and identify bulbs that are poor in quality or condition.

To achieve 2.4, learners must handle bulbs correctly without damaging the outer layers or growing tip. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.5, learners must plant bulbs at the correct depth and orientation. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.6, learners must firm in and backfill bulbs correctly without causing damage to each bulb's growing tip. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.7, learners must label the area. The label must show the date of planting and the botanical name of the bulb.

To achieve 3.1, learners must keep the work area tidy and free from hazards while working and once the task is completed. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.2, learners must demonstrate the ability to differentiate between organic and inorganic waste and dispose of each in the correct manner. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.3, learners must clean and store correctly at least two tools or pieces of equipment related to bulb planting.

Essential resources

The minimum requirement needed to deliver this unit is an area of established turf and planting. Each learner should have access to enough plant material so they can practise adequately to achieve the assessment standards. Tools for planting bulbs will also be required. An area for storing and cleaning tools is needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local gardens or parkland. A talk by the head gardener explaining the importance of using bulbs in turf and planted areas to extend season colour would show this unit in its vocational context. It may be best to do this in spring when many bulbs would be in flower. This may also alert learners to future employment prospects within the chosen industry.

Indicative resource materials

Textbooks

There are no specific textbooks about bulb planting aimed at Entry Level learners. The textbooks listed refer to the subject and contain relevant picture guides.

Brickell C – *RHS Encyclopedia of Gardening* (Dorling Kindersley, 2007)
ISBN 9781405322270

Hessayon Dr D G – *The Bulb Expert* (Expert Books, 2008) ISBN 9780903505420

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 3: Understanding Soils

Unit code: Y/502/4551

QCF Level: Entry 3

Credit value: 3

Unit aim

The practical activities in this unit will enable the learners to understand what soil is and where it has come from. Learners will be able to separate and measure different components that soil is made of as well as appreciating their importance for plant growth. Learners will also find out what sorts of plants grow best in different soil conditions.

Unit introduction

The emphasis in this unit is on developing practical skills as well as knowledge and understanding. The unit will give learners opportunities to:

- examine different soils to identify different layers (or horizons)
- measure soil air and water and recognise humus in soil
- measure drainage rates of soils
- appreciate which plants prefer particular types of soil and how to use this information in a garden or allotment.

Wherever possible, learners should be encouraged to work in pairs or groups since working with others is also an important feature of work in the horticulture industry. However, learners must be encouraged to ask for help whenever it is needed and to respond to any guidance given by tutors or their peers.

Learners should keep a record of all their observations and results, perhaps as a simple PowerPoint presentation, that they can present to the rest of the group and talk through, answering any questions from their peers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know what soil is and where it has come from	1.1 Identify different soil layers 1.2 State origins of soil layers
2 Be able to measure amounts of air and water in soil	2.1 Measure the amounts of air and water in a sample of soil
3 Be able to measure the drainage rate of soil	3.1 Measure the drainage rate of a sample of soil
4 Understand the importance of air and water in soil	4.1 State why air and water are important in soil 4.2 Explain the differences in terms of air and water content between clay soils and sandy soils
5 Know that organic matter (humus) is important for providing nutrients for plant growth	5.1 Identify humus in soil 5.2 State why nutrients are important for plant growth
6 Know which types of soil are preferred by different plants	6.1 Give the optimum soil type for named plants 6.2 State why it is important to take account of the soil type when choosing plants for a site

Unit content

1 Know what soil is and where it has come from

What soil is: soil layers; soil particles: rocks, sand; particle size: clay, sand, silt, humus

Where it has come from: different sizes and types of rock; erosion, lichens, glaciers, wind, rain, rivers

2 Be able to measure amounts of air and water in soil

Measure air: measuring cylinder, water; volume, bubbles of air, decrease in total volume

Measure water: oven, dry soil; weigh

3 Be able to measure the drainage rate of soil

Measure drainage rate: filter funnel, water; how much is retained

4 Understand the importance of air and water in soil

Air: required by plant roots for oxygen, respiration, energy

Water: required by plants for photosynthesis, roots; wilting

Soil: how the size of soil particles affects the drainage rate eg clay has smaller particles and retains more water and less air, sandy retains less water and more air

5 Know that organic matter (humus) is important for providing nutrients for plant growth

Organic matter (humus): eg rotting vegetation, fallen leaves, grass clippings, compost

Nutrients: nitrogen; other nutrients

6 Know which types of soil are preferred by different plants

Types of soil:

Loam – the ‘ideal’ soil has less than 52% sand, between 28% and 52% silt and 7% to 27% clay. Most plants will flourish in loam soil, especially root crops

Chalk – eg cistus shrubs, Cox’s orange pippin apples

Peaty – eg coniferous trees and shrubs such as pine, deciduous trees and shrubs such as acers

Acid – eg shrubs such as azaleas and rhododendrons

Sandy – eg lavender, cistus, poppies

Clay – eg hydrangea, foxglove, lilac

Essential guidance for tutors

Delivery

It is intended that this unit will give learners their first practical experience of the scientific examination of soil types. Learners must have the opportunity to develop their knowledge and, more importantly, their practical skills. This should be facilitated through supervised laboratory and field activities, together with demonstrations of the equipment and techniques involved.

The most important part of this unit is the practical work. This is what will enthuse learners. It is essential that learners can demonstrate their skills in measuring soil air, water and humus practically. Tutors will need to demonstrate these skills and support learners where necessary. It is essential that learners are assessed on what they can do, rather than on what they find difficult. Tutors will need to encourage the learners to ask for help where appropriate and to develop the reliable, positive and enthusiastic qualities that employers may be interested in.

Learners and tutors are encouraged to view this unit as a 'taster', in that it gives learners an opportunity to experience some types of work involved in horticulture and soil science.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Know what soil is and where it has come from</p> <p>Prepare a microscope slide with a soil sample broken up into smaller particles using a needle. Use light from above to illuminate sample (dark ground) to demonstrate different colour rock particles as well as just size. Try with soil samples taken from different locations.</p> <p>Draw or photograph the sample accurately and identify different size, colour and texture of the particles. Label drawing or photograph.</p>
<p>Know what soil is and where it has come from</p> <p>Carry out research into particles of different size and types of rock.</p> <p>Research into how erosion has produced these rock particles that are now known as part of 'soil'. Role of lichens. What rocks have these particles come from?</p>
<p>Be able to measure amounts of air and water in soil</p> <p>Thoroughly and carefully, mix 100 cm³ of undisturbed soil with 100 cm³ of water in a 250 cm³ measuring cylinder and estimate the amount of air, humus and different size rock particles ie clay, silt, sand and larger stones. Draw and label findings – which particles sink the fastest? Notice that the total volume is less than 100 cm³ due to loss of air, enabling measurement of % of air. Leave for one week and then re-examine. Relate findings to previous investigation – ie smallest particles are clay that settles slowly and largest are small stones or gravel that settle more quickly.</p>

Topic and suggested assignments/activities
<p>Be able to measure amounts of air and water in soil</p> <p>Weigh out 5 g of soil in a crucible and then dry it out in an incubator or leave for a week. Re-weigh, calculate loss in mass of water (multiply by 20 to give % for more-able learners).</p> <p>Extension: Roast the above dry soil sample with a Bunsen burner or in an oven for 30 minutes, cool, weigh and calculate the extra mass loss ie organic matter or humus (again multiply by 20 to give % for more-able learners).</p>
<p>Understand the importance of air and water in soil</p> <p>Research into how plants need water and plant roots need oxygen from the air, and how soil helps to provide this.</p>
<p>Be able to measure the drainage rate of soil</p> <p>Show that clay soils with smaller particles retain more water and sandy soils with larger particles allow it to drain through more quickly. Carry this out by putting equal samples of the different soils into filter funnels with filter paper and adding 100 cm³ of water. How much water filters through or is retained?</p>
<p>Know that organic matter (humus) is important for providing nutrients for plant growth</p> <p>Research into the difference between clay, sandy, peaty and loamy soils by considering the particle sizes and amount of humus or organic matter.</p>
<p>Know that organic matter (humus) is important for providing nutrients for plant growth</p> <p>Carry out a small investigation using any of the above techniques (with support) to identify a 'mystery soil'. This could be made up by the tutor or technician.</p>
<p>Know that organic matter (humus) is important for providing nutrients for plant growth</p> <p>Investigate the humus content of two soils, one where plants are flourishing and one where they are not, using the methods already outlined.</p>
<p>Know which types of soil are preferred by different plants</p> <p>Carry out research into what sort of soils (from sandy, loam, peaty and clay) are preferred by certain plants.</p>
<p>Know which types of soil are preferred by different plants</p> <p>Give a simple presentation on one key finding from practical work and relate this to what has been found out about plant preferences for certain types of soil, both from research and any visits carried out.</p>
<p>Know which types of soil are preferred by different plants</p> <p>Optional: if possible organise a visit to a place such as a garden centre, organic farm or nature reserve, so that learners can put their findings into context as well as being able to ask questions about 'Soil Science in the Workplace' (simple treatment only). If this is not possible, use the time to carry out internet research instead. Use these findings as part of the presentation.</p>

Assessment

Achievement of assessment criteria should be evidenced through vocationally-related practical experiences, with tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements.

For 1.1 and 1.2, learners must be able to identify different soil layers and state briefly where the particles that make up these have come from.

For 2.1, learners must be able to use the correct apparatus, with help, to measure the amount of air and water in a soil sample.

For 3.1, learners must be able to use the correct apparatus, with help, to measure the drainage rate of different soil samples.

For 4.1, learners must be able to state why air and water in soil are important for plants. For 4.2, they must be able to explain the difference between a clay soil and a sandy soil.

For 5.1, learners will need to identify humus in soil. For 5.2, they will need to demonstrate an understanding that it is the humus content which helps to determine the nutrient content of soil, in particular nitrogen (fertiliser).

For 6.1, learners will need to name at least two different plants and the types of soil that they require. For 6.2, learners will need to state why taking account of the soil type is important when choosing plants.

Essential resources

Standard laboratory equipment such as beakers, measuring cylinders, oven, filter paper and filter funnels are required. Where available, microscopes, lenses and slides may be used to identify soil particles.

Employer engagement and vocational contexts

Any large garden centre will be useful for a visit to see soil science in action.

Indicative resource materials

Textbooks

Alcott L – *The Royal Horticultural Society: Vegetable and Fruit Gardening* (Dorling Kindersley, 2008) ISBN 9781405331267

Brickell C – *The Royal Horticultural Society: Encyclopaedia of Plants and Flowers* (Dorling Kindersley, 2008) ISBN 9781405330978

Fruit and Vegetable Gardening (Reader's Digest, 2007) ISBN 9780276442056

In addition, plenty of detailed, practical information can be found in a variety of websites such as those listed below.

Websites

<http://en.wikipedia.org/wiki/Soil>

<http://homepage.mac.com/gardensbyivydene/Plants/plantsforpeatyso.html>

<http://theseedsite.co.uk/soil.html>

www.applegategardens.co.uk/acatalog/garden_soil_sunlight.html

www.bbc.co.uk/gardening/htbg/module1/soil_types1.shtml

www.findmeplants.co.uk

www.gardeninghelpuk.com/plants_for_sandy_soils.htm

www.soilassociation.org

Unit 4: Horticulture: Introduction to Pruning Trees and Shrubs

Unit code: Y/600/0129

QCF Level: Entry 3

Credit value: 3

Unit aim

This unit introduces the learner to practical elements of the pruning process for trees and shrubs. Learners will undertake simple pruning tasks using a variety of tools needed for the relevant plant subjects.

Unit introduction

This unit introduces learners to the tools and equipment used in pruning operations.

Emphasis is placed on the correct selection and safe use of the equipment used in pruning tasks.

Learners will be given the opportunity to practise pruning methods using a selection of appropriate tools within an acceptable timescale.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members by contributing to the pruning of plant material and keeping the working area safe and tidy. The unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Prepare for tasks	1.1 Select and wear protective clothing as appropriate, for example, overalls, gloves, safety boots, hard hat, safety glasses 1.2 Identify and select relevant tools and equipment for tasks, for example, secateurs, saws, loppers, long arm pruner, waste bag, wheelbarrow 1.3 Identify work area and subject requiring pruning and prepare for work

Learning outcomes	Assessment criteria
<p>2 Prune trees and shrubs</p>	<p>2.1 Correctly remove plant material as instructed</p> <p>2.2 Demonstrate safe use of equipment</p> <p>2.3 Remove cut material from immediate area and stack ready for disposal</p> <p>2.4 Dispose of cut material appropriately by burning, chipping or creating a habitat pile or collecting in waste bags for disposal later</p> <p>2.5 Ensure surrounding area is left clear of debris</p>
<p>3 Tidy work area</p>	<p>3.1 Clear and tidy work area</p> <p>3.2 Clean tools and store tools and materials after use</p> <p>3.3 Carry out work with due regard for the health and safety of self and others</p>

Unit content

1 Prepare for tasks

PPE: types and uses of eg overalls, gloves, safety boots, hard hat, safety glasses

Tools: types and uses of eg secateurs, pruning saws, bow saws, loppers, long arm pruner, waste bag and wheelbarrow

Identify area and subject: location and identification of the tree or shrub to be pruned

2 Prune trees and shrubs

Prune: methods of pruning and cutting trees and shrubs cleanly

Safety: simple risk assessment forms; reasons for and methods of using sharp tools safely; reasons for and methods of keeping work area free of potential hazards which could cause injuries to the group or others; current, relevant legislation; PPE

Remove and stack material: reasons for removing material from immediate working area; correct stacking methods for easy processing

Disposal of plant material: methods of processing material eg chipping, burning, composting; reasons for creating habitat piles with larger cut material

3 Tidy work area

Tidy work area: reasons for clearing the work area once job is completed; clean and store tools eg secateurs, pruning saws, bow saws, loppers, long arm pruner; reasons for safe storage of tools and materials

Work safely: methods of safe working in line with relevant health and safety legislation; reasons for working safely in group situations

Essential guidance for tutors

Delivery

This unit is intended to give learners their first experience of the basic pruning skills needed to keep trees and shrubs at full flowering potential and indicative shape, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and pruning skills through supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

The unit has been designed to provide the basic knowledge and skills needed to prune trees and shrubs in order to keep the specimens in good health. Emphasis must be placed on safe and effective working practices in all practical tasks being undertaken. The use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working in a team should help learners improve their social and problem-solving skills.

The use of all tools listed in the *Unit content* should be encouraged. However, long arm loppers and bow saws have limited use, so opportunities should be found to use these if the need does not arise naturally.

Tutors should demonstrate the various techniques and skills needed to prune trees and shrubs. Learners must practise all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with pruning various tree and shrub material.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Prepare for tasks</p> <p>Learners shown the tools, equipment and PPE. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners work individually on tool and equipment identification sheets.</p> <p>Tutor-led discussion on how to simply identify the difference between trees and shrubs. A walk and talk showing learners the plants to be used for pruning practice and assessment.</p>
<p>Prepare for tasks</p> <p><i>Assessment:</i> Identification test with tools and equipment laid out and numbered. Learners to have a sheet with pictures/names of tools on it and match number to picture/name. Or learners could, as individuals, compile a presentation showing their understanding and identifying pruning tools and equipment.</p>

Topic and suggested assignments/activities
<p>Prune trees and shrubs</p> <p>Tutor could verbally explain and demonstrate correct practice across a variety of plant material, including stacking and clearing. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate. Videos or presentations can be shown on relevant health and safety. Learners can contribute to a group risk assessment or fill out simple risk assessment sheets individually. Learners shown the difference between organic and inorganic waste materials. Tutor-led discussion on why it is important to compost organic waste where possible or build log piles to encourage wildlife.</p>
<p>Prune trees and shrubs</p> <p><i>Assessment:</i> This can be evidenced by photographs of learners undertaking pruning tasks. Or learners could keep a diary of tasks they have carried out, this can take the form of pictures with notes or as mind-maps. To accompany this, the tutor should complete a marking sheet that shows the specific outcomes achieved.</p>
<p>Tidy work area</p> <p>Tutor-led discussion on why the working area must be kept free from hazards during and after the task. Learners shown the difference between organic and inorganic waste materials. Tutor-led discussion on why it is important to clean and store tools, equipment and PPE correctly and safely.</p>
<p>Tidy work area</p> <p><i>Assessment:</i> This assessment should be integrated with the pruning tasks and logged within the diary of tasks and tutor marking sheet.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Many criteria will need to be assessed directly by the tutor during practical pruning activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. However, some of the criteria may be assessed by the correct completion of forms or paperwork. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must select and wear at least two pieces of PPE relating to pruning activities.

To achieve 1.2, learners must be able to identify and correctly select at least two tools or pieces of equipment related to pruning operations.

To achieve 1.3, learners must be able to individually identify at least one tree or shrub that requires pruning.

To achieve 2.1, learners must demonstrate the ability to prune at least one tree and one shrub. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.2, learners must show the ability to work safely with all the tools needed for pruning trees and shrubs. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.3, learners must stack material correctly at a safe distance from the working area. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.4, learners must dispose of waste correctly, either by chipping, burning or composting. Learners must also be able to demonstrate the ability to build a wildlife habitat by stacking logs. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.5, learners must clear the area of all debris. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.1, learners must keep the work area tidy and free from hazards. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.2, learners must clean and correctly store tools used for pruning tasks.

To achieve 3.3, learners must work safely with others, showing due care and attention to site hazards. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

Essential resources

The minimum requirement needed to deliver this unit is an area of well-established planting containing a range of shrubs and trees. Each learner should have access to enough plant material so they can practise adequately to achieve the assessment standards. An area for storing and cleaning tools is also needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local gardens. A talk by the head gardener explaining the importance of good tree and shrub maintenance would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry.

Indicative resource materials

Textbooks

There are no specific textbooks about plant maintenance and pruning aimed at Entry 3 learners. The textbooks listed refer to the subject and contain relevant picture guides.

Brickell C – *RHS Encyclopedia of Gardening* (Dorling Kindersley, 2007)
ISBN 9781405322270

Brickell C and Joyce D – *RHS Pruning and Training* (Dorling Kindersley, 2006)
ISBN 9781405315265

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 5: Horticulture: Introduction to Ground Preparation

Unit code: K/600/0085

QCF Level: Entry 3

Credit value: 3

Unit aim

This unit introduces the skills required to prepare and level the soil prior to planting. Learners will undertake simple digging, consolidation and raking tasks required to successfully prepare ground ready for planting or seed sowing.

Unit introduction

This unit introduces learners to the tools and equipment used in ground preparation operations. Emphasis is on the correct selection and safe use of the equipment used in ground preparation tasks.

Learners will be given the opportunity to practise double and single digging, consolidation techniques and raking within an acceptable timescale.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members by contributing to the preparation of ground and keeping the working area safe and tidy. The unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Prepare for tasks	1.1 Select and wear personal protective clothing, for example, overalls, safety boots for tasks 1.2 Select and use fork, spade and rake effectively
2 Prepare ground for planting or seed sowing	2.1 Carry out work with due regard to the health and safety of self and others 2.2 Dig an area of ground using a spade and fork as instructed 2.3 Firm ground by treading as instructed 2.4 Rake ground level to provide a tilth suitable for planting or sowing medium sized seed in drills as instructed
3 Tidy work area	3.1 Clear and tidy work area 3.2 Appropriately dispose of debris 3.3 Clean and store tools and materials after use

Unit content

1 Prepare for tasks

PPE: types and uses of eg gardening gloves, steel toecap boots, overalls and sun cream; when and how to use

Tools: correct identification and selection of spade, fork, and rake

2 Prepare ground for planting or seed sowing

Safety: simple risk assessment forms; manual handling techniques for digging; reasons for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

Dig an area: reasons for double digging and single digging an area; appropriate timings for soil type

Firming ground: define consolidation and compaction; reasons for consolidating dug ground

Raking level to fine tilth: reasons for and methods of raking ground to ensure even tilth and levelness of area

3 Tidy work area

Tidy work area: reasons for keeping the work area tidy and clear of debris; disposal of debris eg correct disposal of organic and inorganic materials, reasons for composting green waste; cleaning and storage of eg spades, forks and materials; reasons for safe storage of tools and materials

Essential guidance for tutors

Delivery

This unit is intended to give learners their first experience of the basic ground preparation skills needed to establish specimens or grow plants from seed, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and practical ground preparation skills through supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

The unit has been designed to provide the basic knowledge and skills needed to prepare commonly found soil types. Emphasis must be placed on safe and effective working practices in all practical tasks being undertaken. The use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working in a team should help learners improve their social and problem-solving skills.

It is recognised that, depending on area and topography, soil types may not differ greatly, but learners can prepare existing plots and newly broken ground to gain greater experience.

Tutors should demonstrate the various techniques and skills needed to prepare ground for planting and learners must practice all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with consolidation and raking to provide a level surface for planting or seed sowing.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Prepare for tasks</p> <p>Learners shown the tools, equipment and PPE. Tutor-led discussion on uses and safety of all relevant tools, equipment and PPE. Videos or presentations can be shown on relevant health and safety, including manual handling techniques when digging.</p>
<p>Prepare for tasks</p> <p><i>Assessment:</i> Identification test with tools, equipment and PPE laid out and numbered. Learners to have a sheet with pictures/names of tools, equipment and PPE on it, and match number to picture/name. Or learners could, as individuals, compile a presentation showing their understanding and identifying the relevant tools, equipment and PPE.</p>

Topic and suggested assignments/activities
<p>Prepare ground for planting or seed sowing</p> <p>Learners can contribute to a group risk assessment or fill out simple risk assessment sheets individually. Videos or presentations can be shown on relevant health and safety. Tutor-led discussion on why adding bulky organic matter is important in soil preparation. Learners could, in groups, produce posters explaining the benefits and disadvantages of different soil types, including the ideal times to dig. Tutors could verbally explain and demonstrate how to carry out single digging, double digging, consolidation and raking techniques correctly. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p>
<p>Prepare ground for planting or seed sowing</p> <p><i>Assessment:</i> This can be evidenced by photographs of learners undertaking single digging, double digging, consolidation and raking. Or learners could keep a diary of tasks they have carried out, in the form of pictures with notes or as mind-maps. To accompany this, the tutor should complete a marking sheet that shows the specific outcomes that have been achieved.</p> <p>If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.</p>
<p>Tidy work area</p> <p>Tutor-led discussion on why the working area must be kept free from hazards during and after the task. Learners shown the difference between organic and inorganic waste materials. Tutor-led discussion on why it is important to compost organic waste. Tutor-led discussion on why it is important to clean and store tools, equipment and PPE correctly and safely.</p>
<p>Tidy work area</p> <p><i>Assessment:</i> Learners could, as individuals, compile a presentation showing their understanding of why it is important to keep an area tidy, dispose of waste correctly and store tools, equipment and PPE away cleanly and safely.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being carried out that match the assessment criteria.

Many criteria will need to be assessed directly by the tutor during practical ground preparation activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. However, some of the criteria may be assessed by the correct completion of forms or paperwork. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must select and wear at least two pieces of PPE relating to ground preparation activities.

To achieve 1.2, learners must be able to identify and correctly use a fork, spade and rake.

To achieve 2.1, learners must show the ability to work safely with others, showing due care and attention to site hazards. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.2, learners must single dig and double dig at least two different types of ground. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.3, learners must consolidate ground correctly without causing compaction. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.4, learners must rake and level the prepared ground to the correct tilth requirements for the chosen planting. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.1, learners must keep the work area tidy and free from hazards. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.2, learners must demonstrate the ability to differentiate between organic and inorganic waste and dispose of each in the correct manner. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 3.3, learners must clean and store a fork, spade and rake correctly.

Essential resources

The minimum requirement needed to deliver this unit is an area of land which has either two different soil types or an area of previously prepared ground and an area of unprepared ground. Each learner should have access to enough ground so they can practise adequately to achieve the assessment standards. An area for storing and cleaning tools is also needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting parks and gardens. A talk by the grounds supervisor would highlight the benefits of correct ground preparation and show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry.

Indicative resource materials

Textbook

Ryrie C – *Soil* (Gaia Books Ltd, 2001) ISBN 9781856751223

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 6: Check that a Small Animal is Healthy

Unit code: Y/502/0614

QCF Level: Entry 3

Credit value: 3

Unit aim

To enable learners to demonstrate their ability to complete a health check on a dog or cat or rabbit restrained by a supervisor.

Unit introduction

Developing the knowledge, understanding and practical skills needed to assist with the restraint and health checking (including recognising signs of good health) of small animals will be essential for learners hoping to find employment in the animal care industries. Being able to maintain one's own safety and hygiene in the workplace is also essential for those wishing to work as an animal carer. This unit will enable learners to develop the skills and underpinning knowledge needed to be able to operate effectively at a support level in the workplace.

Practical ability, underpinning knowledge and awareness of health and safety and animal welfare when restraining and health checking small animals, and using appropriate equipment and techniques, will be developed.

For the purpose of this unit and assessments the term 'small animals' refers to dogs, cat and rabbits, although species commonly kept as pets in the UK, such as birds, fish, insects, reptiles and amphibians, may be used to provide contrasting experience. Learners will be expected to work with dogs, cats and rabbits primarily, with assessment covering at least one of these three species.

The unit also provides opportunities to develop other skills such as working independently, working with others, communication and using ICT.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to restrain and complete a health check on a small animal</p>	<p>1.1 Prepare to restrain a small animal 1.2 Restrain a small animal 1.3 Recognise areas of the body for checking to establish health 1.4 Identify signs of good health in small animals 1.5 Maintain own safety and hygiene throughout operations</p>
<p>2 Know the signs of good health in a small animal</p>	<p>2.1 State the signs which indicate that a small animal is healthy</p>

Unit content

1 Be able to restrain and complete a health check on a small animal

Restraining animals: health and safety eg hand washing/drying, personal protective equipment; handling/restraint equipment and safe usage eg collar, harness, lead, towel, restraining bag, crush cage, carry cage; restraint methods for different species including manual restraint eg dogs, cats, rabbits; animal welfare eg good handling, signs of stress

Health checks: visual and physical health checks; equipment used eg towel, thermometer, weighing scales; parts of body checked eg nose, eyes, ears, mouth including teeth and tongue, front legs/feet/claws, back legs/feet/claws, belly, bottom, private parts, tail

Signs of health: physical signs, parasites, behaviour/movement, eating and drinking, weight, body temperature, breathing, toileting, differences between species/individual animals

Maintaining safety and hygiene: workplace health and safety eg hazards, risks; items eg overalls, steel toecap boots; use and storage of personal protective equipment; personal hygiene eg hand washing/drying; safe use, cleaning and storage of equipment; safe independent working, working safely with others, awareness of working environment

2 Know the signs of good health in a small animal

Good health indicators: good physical health for species/individual eg shiny fur, bright eyes, clean nose, clean ears, pink gums; healthy behaviour/movement for species/individual eg walking without pain, normal vocalisations; healthy eating and drinking for species/individual eg amount; healthy weight range for species/individual; healthy temperature for species/individual; healthy breathing for species/individual; healthy toileting for species/individual eg amount, colour

Poor health indicators: poor physical health for species/individual eg dull fur, bleeding, lumps, parasites; unhealthy behaviour/movement for species/individual eg limping, inactivity; unhealthy eating and drinking for species/individual eg lack of appetite, excessive thirst; unhealthy weight range for species/individual eg underweight/overweight; unhealthy temperature for species/individual eg too low/high; unhealthy breathing for species/individual eg panting, too fast/slow; unhealthy toileting for species/individual eg constipation, diarrhoea

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be based mainly on a series of practical activities with a range of small animals, focusing primarily on dogs, cats or rabbits. Both the handling/restraint and health checking aspects of the unit can form integral parts of working on an animal unit and maintaining animal health and can be taught, practised and assessed in that environment. Health and safety and hygiene are also inherently part of this working environment. Naturally occurring opportunities should be exploited to put learners in a realistic situation, although individual abilities and available facilities will regulate what can be carried out. Learners will need to develop appropriate skills and knowledge during formative practical sessions with some theory work. Assessment is likely to be on a continuous basis during the programme, taking place when learners have developed the appropriate level of knowledge and practical skill.

Learners can discuss with the tutor and peer group the appropriate methods and equipment for handling/restraining animals, as well as how to health check animals and signs of good/poor health for a variety of animal species and individuals. The standards and methods discussed can be agreed as appropriate and used to assist in developing learners' independent knowledge and skills. This is an essential part of the delivery of this unit.

A range of animals should be made available and is likely to include mammals, birds, fish, insects, reptiles and amphibians. Handling/restraint and health for dogs, cats and rabbits should be the primary focus and assessment must take place with one or more of these three named species.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussions to develop knowledge of health and safety and animal welfare whilst handling/restraining and health checking animals. Awareness of personal safety and hygiene should also be introduced with time allocated for this to be developed during practical work.
Research work and formative discussions to develop knowledge of animal health and signs of good and poor health in appropriate species. Time may also be allocated to carrying out the same with other animal species for contrasting/additional practical experience.
Tutor demonstrations of techniques for handling/restraining animals and use of equipment.
Opportunity for practical work on an animal unit involving handling/restraining a variety of animal species, focusing primarily on dogs, cats or rabbits.
Opportunity for practical work on an animal unit involving health checking a variety of animal species, focusing primarily on dogs, cats or rabbits.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners are required to prepare to restrain a small animal. Learners will need to be given clear demonstrations and practical opportunities to work with the available restraint equipment several times before assessment takes place. When being assessed, learners must be given a clearly stated task to carry out, to enable them to select and prepare the appropriate equipment. Learners will need formative opportunities to carry out the preparations needed to restrain small animals before assessment. Assessment is likely to take the form of authenticated photographic evidence or an observation record (or a combination of both) for one or more of the three different species of animal covered by this unit. Learners could provide some annotations to explain the actions in the photographs. This criterion could be assessed with 1.2, 1.3, 1.4 and 1.5.

For 1.2, learners need to restrain a small animal. This criterion is likely to be assessed with 1.1. If this is the case, the same instructions and assessment method could be used. To achieve 1.2, learners will be required to actually restrain, or assist in restraining, the small animal. Learners will need to be given clear demonstrations and practical opportunities to practise the techniques several times before any assessment takes place. Great care must be taken with regard to health and safety, inherent animal welfare and the safe use of restraint equipment. Learners need to be assessed preparing to restrain one or more of the three named small animal species in the unit.

For 1.3, learners are required to recognise areas of the body to check in order to establish health. This criterion could be assessed independently or with 1.2. Assessment could take the form of an observation record stating that learners recognised all the named body parts used when establishing health in small animals. Annotated photographic evidence may also be beneficial if assessment is practically based. Alternatively, a piece of work produced by learners may suffice when annotated to demonstrate knowledge on areas of the body that are checked to establish health. Learners will need opportunities to investigate body parts and areas to check on for a variety of animals to establish their health. Learners need clear theoretical and practical opportunities to be able to identify a healthy animal and develop the underpinning knowledge needed to carry out skilled health checks, several times before assessment takes place. Learners need to be assessed on areas of the body to check to establish health in one or more of the three named small animal species in the unit.

For 1.4, learners are required to identify signs of good health in small animals. This criterion should be assessed with 1.3 and the same assessment method applied, with the possible addition of an observation record stating learners were able to communicate relevant signs of good health in small animals. As in 1.3, annotated photographic evidence may also be beneficial evidence for a portfolio, or written work could be used. Learners need clear theoretical and practical opportunities to be able to identify signs of good health in small animals several times before assessment takes place. Learners need to be assessed on identifying signs of good health in one or more of the three named small animal species in the unit.

For 1.5, learners are required to maintain own safety and hygiene throughout. This criterion requires assessment over a given time period to allow learners to demonstrate awareness of their own safety and hygiene when working in a working environment/animal unit. Assessment could take the form of authenticated photographic evidence or an observation record (or a combination of both), with learners providing some annotations to explain the actions in the photographs. Learners need clear theoretical and practical opportunities to be able to demonstrate competent and safe working practices, and develop underpinning knowledge, several times before assessment takes place. Learners need to be assessed on maintaining own safety and hygiene when working with one or more of the three named small animal species in the unit.

For 2.1, learners are required to state the signs which indicate that a small animal is healthy. Learners will need formative opportunities to research and discuss details of the signs of good health in small animals, as well as poor health for comparison, before assessment. Assessment could take the form of either an observation record, authenticated photographic evidence, or a combination of both. Learners need to be assessed on indicating that one or more of the three named small animal species in the unit is healthy.

Essential resources

Access to dogs, cats and rabbits is essential; to ensure varied experiences for learners, the range of animals used should not be limited to just one of these species. A variety of additional animals commonly kept as pets in the UK should also be made available and, where possible, should include mammals, birds, fish, insects, reptiles and amphibians to provide more experience for learners. Related resources such as handling/restraining equipment and equipment used in monitoring animal health, such as thermometers and weighing scales, as well as access to materials showing evidence of poor health in small animals, are essential.

Transport for visits to animal care establishments may be required for centres not able to provide sufficient opportunities to meet the assessment requirements in house. Transport for visits to veterinary centres is also recommended. Alternatively, a visit to the centre by veterinary staff may provide a useful resource. A range of books and pet care magazines should be available and CD ROMs and DVDs may also be appropriate learning resources. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE. Sufficient support must be provided, where necessary, for the development and achievement of the group/individuals with appropriate levels of supervision provided at all times, especially when activities are carried out in the working environment/animal unit.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an animal unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready to progress to a higher level of study in an animal-related subject or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The textbooks listed below are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Edney A – *RSPCA Complete Cat Care Manual* (Dorling Kindersley, 2006)
ISBN 9781405314671

Evans M – *How to Look After Your Pet Kitten* (Dorling Kindersley, 1996)
ISBN 9780751354034

Evans M – *How to Look After Your Pet Puppy* (Dorling Kindersley, 1996)
ISBN 9780751353976

Evans M – *How to Look After Your Pet Rabbit* (Dorling Kindersley, 1996)
ISBN 9780751353983

Fogle B – *RSPCA Complete Dog Care Manual* (Dorling Kindersley, 2006)
ISBN 9781405314688

RSPCA – *Care for your Rabbit* (Collins, 2004) ISBN 9780007182701

Although to achieve this unit learners must be assessed on their work with dogs, cats or rabbits, they should have opportunities to work with other animal species and may therefore find these books of interest.

Newman C – *All About Your Iguana* (Ringpress Books Ltd, 2000) ISBN 9781860541629

Newman C – *All About Your Snake* (Ringpress Books Ltd, 2000) ISBN 9781860541674

RSPCA – *Care for your Budgerigar* (Collins, 2005) ISBN 9780007193585

RSPCA – *Care for your Guinea Pig* (Collins, 2004) ISBN 9780007182695

RSPCA – *Care for your Hamster* (Collins, 2005) ISBN 9780007193578

Taylor D – *The Small Pet Handbook* (HarperCollins, 2002) ISBN 9780007134489

Viner B – *All About Your Finch* (Ringpress Books Ltd, 1998) ISBN 9781860540578

Viner B – *All About Your Goldfish* (Ringpress Books Ltd, 1997) ISBN 9781860540363

Journals

The use of journals depends on the interest and abilities of learners. While these may not be commonly used at this level, certain periodicals may be of interest. The resources listed below are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Cat World

Dogs Today

Fur & Feather (incorporating *Rabbits*)

Publications on small animals other than dogs, cats or rabbits may also be of interest.

Websites

Learners should have the opportunity to access a range of internet resources relating to dogs, cats and rabbits, as well as to other small animals. The following websites may be species-specific or general.

www.bluecross.org.uk	The Blue Cross
www.dogstrust.org.uk	The Dogs Trust
www.petcare.org.uk	The Pet Care Trust
www.rspca.org.uk	The Royal Society for the Prevention of Cruelty to Animals
www.thebrc.org	The British Rabbit Council

Unit 7: Assist with Catching and Restraining a Small Animal

Unit code: R/502/0613

QCF Level: Entry 3

Credit value: 2

Unit aim

To enable learners to demonstrate their ability to assist with catching and restraining a dog or cat or rabbit for a specific purpose.

Unit introduction

In this unit learners will develop knowledge, understanding and practical skills to enable them to assist with catching and restraining small animals in a range of situations, including the movement of animals between locations.

Learners will develop an understanding of the equipment used to catch, restrain and move animals between locations, and the identification of risks involved and the maintenance of personal hygiene. This unit will allow learners to progress into supported employment or higher level courses.

Learners must have access to dogs, cats and rabbits for this unit, but would benefit from access to a wider variety of pet animals that may include small mammals, birds, reptiles, fish, amphibians and insects.

The unit also allows learners to develop their communication skills, the ability to work as part of a team, improving their own learning and performance and basic ICT skills.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to catch and restrain a small animal</p>	<p>1.1 Recognise suitable equipment for catching and restraining small animals</p> <p>1.2 Assist with catching a small animal</p> <p>1.3 Assist with restraining a small animal</p> <p>1.4 Identify equipment used to move/transport small animals</p> <p>1.5 Move/transport a small animal from one location to another</p> <p>1.6 Maintain own safety and hygiene throughout operations</p>
<p>2 Understand why small animals need to be restrained and moved safely</p>	<p>2.1 Give a reason why care should be taken when moving and restraining animals</p>

Unit content

1 Be able to catch and restrain a small animal

Equipment: baskets, transport boxes, cages, tanks, collar, lead, harness, muzzle, net, gloves, pillowcase, snake hook, crush cages

Catching and restraining: methods of minimising stress to animal, signs of stress, approach of handler, methods of capture, safe and correct handling techniques appropriate to species

Moving animals: preparation eg identification and use of suitable equipment, cage/enclosure set up; welfare considerations during transportation eg water, food, bedding; settling animal after transport; hygiene of facilities, safe disposal of waste

Health and safety: identification of risks involved, personal protective equipment (PPE), personal hygiene, accident reporting and identification of first aider

2 Understand why small animals need to be restrained and moved safely

Purpose: eg routine health checks, routine cage maintenance, trip to vet, animal groomer, animal show, training classes

Welfare of animal: Five Needs, consequences of poor handling, signs of stress

Safety of handler: identification of risks involved, prevention methods

Essential guidance for tutors

Delivery

This unit should be delivered in an appropriate animal unit or animal collection housing as a minimum dogs, cats and rabbits. Where these animals are not available, trips to relevant collections must be undertaken. Learners should assist in a range of routine animal handling tasks involving the capture, restraint and movement of animals between locations. Practical activities should take place during naturally occurring opportunities, such as the removal of an animal from a cage for cage maintenance, health checking etc. Welfare considerations must be taken into account at all times.

Group discussions can be held before practical activities are carried out to identify the relevant equipment needed for the activity, risks involved and personal hygiene considerations. Learners should be able to demonstrate an understanding of the reasons for carrying out practical activities in a safe manner.

Learners should be given the opportunity to develop their skills with a range of animals but will be assessed based on working with dogs, cats or rabbits throughout the duration of the unit.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Identification of suitable equipment for use in the capture, restraint and transport of small animals to include an oral/written assessment.
Identification of risks in animal care routines.
Tutor demonstration of handling and restraint techniques.
Practical work on the animal unit to assist with catching and restraining animals for use in daily routine tasks. Assessed and evidenced by portfolio of authenticated photographs and written statements from learners.
Practical work on the animal unit to move animals safely between locations during routine tasks. Assessed and evidenced by portfolio of authenticated photographs and written statements from learners.
Discussion work to cover reasons for handling, moving and restraining animals with care.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Authenticated photographs and simple written statements can form the basis of learner portfolios to evidence the practical work. In addition to this, witness statements, evidenced oral assessment and discussion work can be used as assessment evidence.

For 1.1, learners are required to recognise suitable equipment for catching and restraining small animals. This may be assessed through oral questioning during the practical activities for 1.2 and 1.3, or a mix/match exercise where learners match the name of the equipment to the relevant picture provided by the tutor. This may also be evidenced by a poster or leaflet.

For 1.2, learners are required to assist with catching a small animal. Assessment for this criterion is likely to be continuous throughout the duration of the unit. Formative assessment will allow learners to improve their skills and reach the required level of competence. This will be evidenced through witness statements, authenticated photographs and simple written statements from learners in a portfolio. Learners must be confident to assist with the capture of a dog, cat or rabbit.

For 1.3, learners are required to assist with restraining a small animal. Assessment for this criterion will be as described for 1.2 and may be assessed at the same time as 1.2. Learners must be confident to assist with the restraint of a dog, cat or rabbit.

For 1.4, learners are required to identify equipment used to move/transport small animals. This may be assessed at the same time as 1.1 if carried out as a stand-alone activity, for example a mix/match activity, poster or leaflet work. This criterion may also be assessed through oral questioning by the tutor during the practical activities for 1.5.

For 1.5, learners are required to move/transport a small animal from one location to another. Evidence may be in the form of witness statements or authenticated photographs with simple written statements from learners in a portfolio. Practical activity should take place during naturally occurring opportunities such as the removal of an animal from a cage for cage maintenance, health checking etc. Welfare considerations must be taken into account at all times.

For 1.6, learners are required to maintain their own safety and hygiene throughout operations. This will be evidenced through the ongoing assessment for 1.2, 1.3, and 1.5 and will take the form of witness statements.

For 2.1, learners are required to give a reason why care should be taken when moving and restraining animals. This may be assessed through oral questioning during the practical activities carried out for 1.5 and/or 1.3. It may also be assessed in a group discussion and evidenced by witness statements. Learners should be able to demonstrate understanding of welfare considerations for the animal and of human safety in order to achieve this criterion.

Essential resources

Access to a variety of suitable animals from the range encompassing mammals, birds, fish, insects, reptiles and amphibians and to feed rooms, feeds, bedding materials and substrates and accommodation is essential, with appropriate levels of supervision available to support learning. Transport for visits to animal care establishments may be required for centres not able to provide sufficient opportunities to meet the assessment requirements in house. A range of books, pet care magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct Personal Protective Equipment (PPE).

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an animal unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready to progress to a higher level of study in an animal-related subject or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The textbooks listed below are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Alderton D – *The Illustrated Practical Guide to Small Pets and Pet Care* (Southwater, 2008) ISBN 9781844765959

Elwood M and Ruelokke M – *Guinea Piglopaedia* (Ringpress Books Ltd, 2003) ISBN 9781860542510

Evans J and White K – *Catlopaedia* (Ringpress Books Ltd, 2006) ISBN 9781860540189

Evans J and White K – *Doglopaedia* (Ringpress Books Ltd, 1998) ISBN 9781860540745

Grindol D – *The Canary: An Owner's Guide to a Happy Healthy Pet* (John Wiley & Son, 2000) ISBN 9781582450186

Harper D – *Caring for Your Pet Hamsters and Gerbils* (Interpet Publishing, 1999) ISBN 9781902389813

Logsdail C, Logsdail P and Hovers K – *Hamsterlopaedia* (Ringpress Books Ltd, 2003) ISBN 9781860542466

Manning D – *Exotic Pets* (Collins, 2008) ISBN 9780007262755

Martin H – *Zebra Finches* (Barron's Educational Series, 2000) ISBN 9780764110405

Meadows G and Flint E – *The Dog Owner's Handbook* (Caxton, 2002) ISBN 9781840673302

Mills D – *Aquarium Fish* (Dorling Kindersley, 2000) ISBN 9780751327267

RSPCA – *Care for your Budgerigar* (Collins, 2005) ISBN 9780007193585

RSPCA – *Care for your Guinea Pig* (Collins, 2004) ISBN 9780007182695

RSPCA – *Care for your Hamster* (Collins, 2005) ISBN 9780007193578

RSPCA – *Care for your Rabbit* (Collins, 2004) ISBN 9780007182708

Taylor D – *The Ultimate Cat Book* (Dorling Kindersley, 1994) ISBN 9780863183713

Websites

www.bluecross.org.uk	The Blue Cross
www.defra.gov.uk	Department for Environment, Food and Rural Affairs
www.dogstrust.org.uk	The Dogs Trust
www.petcare.org.uk	The Pet Care Trust
www.rspca.org.uk	The Royal Society for the Prevention of Cruelty to Animals
www.thebrc.org	The British Rabbit Council
www.the-kennel-club.org.uk	The Kennel Club

Unit 8: Groom a Small Animal

Unit code: D/502/0615

QCF Level: Entry 3

Credit value: 2

Unit aim

The learner will be able to groom a dog or cat or rabbit restrained by the supervisor.

Unit introduction

Developing the knowledge, understanding and practical skills needed to assist with the grooming of small animals will be essential for learners hoping to find employment in the animal care industries. This unit will enable learners to begin to develop the necessary skills and underpinning knowledge to be able to operate effectively under close supervision when in employment or to progress onto a Level 1 course, providing the necessary criteria are met.

Practical ability, underpinning knowledge and an awareness of health and safety and animal welfare when grooming will be developed.

For the purposes of this unit learners may work with a number of different ‘small animals’ but the term is narrowed to include only dogs, cats and rabbits to meet the assessment criteria.

The unit will also give learners opportunities to develop other skills such as improving own learning and communication.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to groom a small animal	1.1 Give a reason for grooming a small animal 1.2 Recognise items of grooming equipment 1.3 Restrain a small animal for grooming 1.4 Groom a small animal 1.5 Use, clean and store PPE, tools and equipment safely 1.6 Maintain the safety of self, others and animals during the operation 1.7 State why PPE needs to be worn

Unit content

1 Be able to groom a small animal

Grooming equipment: correct equipment for animal eg slicker brush, comb, soft brush, scissors, undercoat rake, de-matter, nail clippers; grooming table

Restraint: methods of restraint eg carrying boxes, slip leads, grooming arm; correct restraint techniques

Grooming: reasons eg health checks, relationships, moulting, mats; systematic technique; signs of stress; welfare of the animal

Health and safety: safe use and storage of equipment; PPE; cleaning surfaces and equipment; safety of self, others and animals

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be through a series of practical grooming activities, with a range of small animals, which can be taught, practised and assessed in an animal unit where grooming can be carried out safely.

Naturally occurring opportunities should be exploited to put learners in a realistic situation, for example moving dogs, cats and rabbits from the holding area to the grooming area. Learners will need to develop appropriate skills and knowledge during formative practical sessions and may practise on any small animal species while close supervision.

Assessment is likely to take place on a continuous basis during the programme, taking place when learners have developed the appropriate level of skill, but assessment must involve grooming a dog, cat or rabbit. The particular species should be agreed with learners in advance but, where possible, similar species should be used for all learners to ensure fairness.

Learners can discuss with the tutor and peer group appropriate methods for grooming and restraining animals while ensuring the welfare of the animal. The standards and methods discussed and agreed can then be implemented during practical work, which will be an essential part of the delivery of this unit.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Discussions to highlight the reasons for grooming small animals and the appropriate techniques.
Discussions on maintaining animal welfare and common signs of stress.
Identification of grooming equipment and suitable methods of restraining small animals.
Demonstration of grooming and restraint techniques by tutor.
Identifying areas of risk during grooming and restraint of small animals and suitable methods of controlling risks.
Practical work on the animal unit to assist with catching and moving small animals from the holding area to the grooming facilities and demonstrating appropriate restraint methods.
Practical work on the animal unit demonstrating grooming techniques appropriate to specific small animals restrained by the supervisor.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners need to give a reason for grooming a small animal. This is likely to be assessed through oral questions and answers with a written record of the answers being maintained as evidence. This criterion could be assessed at the same time as 1.7.

For 1.2, learners need to recognise items of grooming equipment. A minimum of two items of equipment should be identified, which should be appropriate for the animal they are about to groom. This criterion could be assessed at the same time as 1.3, 1.4, and 1.5 and could be evidenced through observation records including photographs and/or video.

For 1.3, learners need to restrain a small animal for grooming. This can be assessed after periods of training and practise followed by formative feedback, and can be assessed at the same time and in a similar manner to 1.2. Clear instructions should be given to learners and these should be recorded in the observation records if video evidence is not used.

For 1.4, learners need to groom a small animal. This should follow the same process as for 1.3 and can be assessed at the same time as 1.2 and 1.3. During this assessment the animal can be restrained by the supervisor.

For 1.5, learners must use, clean and store PPE, tools and equipment safely. This should follow the same process as for 1.3 and can be assessed at the same time as 1.2, 1.3 and 1.4. Learners should also adhere to the protocols of the animal unit in which they are working.

For 1.6, learners must maintain the safety of self, others and animals during the operation. This should be evidenced through continual assessment during the periods of training and practise as well as during the final practical. Formative assessment should be given to help learners to improve and verification could be in the form of observation records.

For 1.7, learners need to state why PPE should be worn. This is likely to be assessed in a similar manner to 1.1 and could be assessed at the same time.

Essential resources

Access to a variety of suitable animals (including dogs, cats and rabbits) and grooming equipment is essential, with appropriate levels of supervision available to support learning. Transport for visits to animal care establishments may be required for centres not able to provide sufficient opportunities to meet the assessment requirements in house. A range of books, pet care magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an animal unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready to progress to a higher level of study in an animal-related subject or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The textbooks listed below are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Alderton D – *The Illustrated Practical Guide to Small Pets and Pet Care* (Southwater, 2008) ISBN 9781844765959

Dallas S, North D and Angus J – *Grooming Manual for the Dog and Cat* (Blackwell Publishing Ltd, 2006) ISBN 9781405111836

Evans J and White K – *Catlopaedia* (Ringpress Books Ltd, 2006) ISBN 9781860540189

Evans J and White K – *Doglopaedia* (Ringpress Books Ltd, 1998) ISBN 9781860540745

RSPCA – *Care for your Rabbit* (Collins, 2004) ISBN 9780007182708

Taylor D – *The Ultimate Cat Book* (Dorling Kindersley, 1994) ISBN 9780863183713

Taylor D – *Ultimate Dog* (Dorling Kindersley, 2005) ISBN 9780751333947

Journals

Cat World

Dogs Monthly

Pet Focus

Websites

www.bluecross.org.uk	The Blue Cross
www.defra.gov.uk	Department for Environment, Food and Rural Affairs
www.dogstrust.org.uk	The Dogs Trust
www.petcare.org.uk	The Pet Care Trust
www.rspca.org.uk	The Royal Society for the Prevention of Cruelty to Animals
www.thebrc.org	The British Rabbit Council
www.the-kennel-club.org.uk	The Kennel Club

Unit 9: Preparing for an Interview

Unit code: M/501/6326

QCF Level: Entry 3

Credit value: 1

Unit aim

The purpose of this unit is to introduce learners to the most important aspects of preparing for an interview, with an emphasis on planning ahead of the interview.

Unit introduction

The purpose of this unit is to introduce learners to the most important aspects of preparing for an interview. The emphasis is on planning before the interview to enhance the chances of a successful outcome to the interview itself. Learners will develop the ability to identify the key requirements of the job role, placement or course for which they are being interviewed. They will also look at how to prepare answers for likely interview questions and find the appropriate means of travel to the interview.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know what is required in the job, placement or course for which they are applying	1.1 Identify the main tasks and activities associated with the job role or placement or areas of learning to be covered in the course
2 Be able to prepare responses for likely interview questions	2.1 With support, prepare brief answers to a given set of questions that are likely to be asked at the interview
3 Know that it is important to plan their travel for the interview	3.1 Identify from information provided to them, the time and place where the interview will be held 3.2 With support, identify the route and means of transport which they plan to take

Unit content

1 Know what is required in the job, placement or course for which they are applying

Main tasks or activities: job role, requirements and responsibilities; routine or working/study hours; required attitude and behaviour; expectations of employer or training provider; relevant organisational rules or structure

2 Be able to prepare responses for likely interview questions

Prepare answers to likely interview questions: prepare answers that are accurate and relevant to the questions; using appropriate language in the answers

3 Know that it is important to plan their travel for the interview

Plan their travel: eg timekeeping, route of travel, travel information, maps/travel plans, interview address and location

Essential guidance for tutors

Delivery

The emphasis of this unit is on helping the learner to prepare for an interview in order to assist them when they are seeking employment or further training.

For learning outcome 1, learners might find out about the main tasks and activities associated with the job role, placement or main areas of learning through group discussion, directed investigation (for example internet searches on given websites) or via leaflets, newspapers or other publications given to them.

For learning outcome 2, learners could work in groups to determine suitable answers for different interview questions. Tutors or line managers should provide examples of likely interview questions, although learners may also be able to refer to previous interview questions they have encountered.

Learners could work in groups to plan travel to interviews for different scenarios. Group discussion about which travel plans are workable, and any difficulties arising from those options, could give learners an understanding of how to make appropriate travel choices. Solutions could be collated on a board or flipchart.

The interview being prepared for may be for a job, placement or place on a training course. It could be a real situation but a simulated interview is equally acceptable. Whether real or simulated, every effort should be made to provide an interview opportunity that relates directly to the learner's current or intended work or training interests. The interview should also relate to a job, placement or course which learners at this level could reasonably be expected to perform or enrol in.

Assessment

The assessment criteria for this unit may be combined into one assessment task. The learner may participate in group discussions or one-to-one tutorials which could be recorded by the tutor/line manager for verification purposes. Alternatively, the learner could complete a pro forma or leaflet which covers all criteria.

For 1.1, the learner will need to give information about three main tasks and/or activities associated with the job role or placement or areas of learning to be covered in the course.

For 2.1, tutors should provide lists of likely interview questions (for example: Why do you want this job? What do you hope to achieve on this placement? What do you hope to do once you have completed this course?). The learner may discuss possible answers with others but must come up with their own final versions which need to relate to the job, placement or course identified in 1.1.

For 3.1, the learner must be able to independently identify the time and place where the interview will be held from straightforward, clearly presented information supplied by the tutor/line manager.

For 3.2, the learner needs to identify their route and means of transport to the interview. They may be assisted in choosing and planning their route and means of transport.

Essential resources

In order to prepare for an interview, the learner will need a given brief for an appropriate job, placement or place on a training course.

Indicative resource materials

Websites

www.bbc.co.uk/skillswise/e3

www.connexions-direct.com/index.cfm?go=Travel

www.direct.gov.uk/en/TravelAndTransport/PlanningYourJourney

www.jobcentreplus.gov.uk

Unit 10: Interview Skills

Unit code: T/501/6327

QCF Level: Entry 3

Credit value: 1

Unit aim

This unit introduces learners to the key aspects of conduct appropriate for interview scenarios and will equip learners with basic interview skills, including being able to reflect on how well they did in the interview.

Unit introduction

Knowing how to conduct yourself during an interview, whether in the context of work or study, requires a variety of skills that can be learned and refined with practice. This unit introduces learners to the key aspects of conduct appropriate for interview scenarios. Learners will be equipped with basic interview skills so that they are able to present themselves at an interview, answer the interviewer's questions in an appropriate manner, paying attention to both verbal and non-verbal aspects of communication, and be able to reflect on how well they did in the interview.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know how to present themselves appropriately at an interview	1.1 Dress appropriately and display an appropriate level of personal hygiene for the interview 1.2 Use appropriate means of non-verbal communication such as body language and facial expressions
2 Be able to give appropriate answers to the interviewer's questions	2.1 Give clear, straightforward answers to the questions asked
3 Know how they performed in the interview	3.1 Identify one aspect of the interview that went well and one that did not

Unit content

1 **Know how to present themselves appropriately at an interview**

Present themselves appropriately: different dress codes for interview situations; the importance of personal hygiene; personal appearance affects the interviewer's impression of the learner

Non-verbal communication: use of non-verbal communication affects the interviewer's impression of the learner eg appropriate body language, posture and facial expressions

2 **Be able to give appropriate answers to the interviewer's questions**

Give clear, straightforward answers: listening carefully to a question so that the appropriate answer can be given, asking for the question to be repeated if necessary, thinking about the answer before responding, communicating clearly, giving accurate information in the answer

3 **Know how they performed in the interview**

What went well and what did not go so well: the outcome of the interview; parts of the interview that were easy or enjoyable eg personal presentation and dress were appropriate for the interview, able to answer all the interviewer's questions; parts of the interview that were challenging eg couldn't remember answers to some of the interview questions, felt nervous and had to ask for several questions to be repeated, found it difficult to concentrate for entire duration of interview

Essential guidance for tutors

Delivery

In thinking about the skills needed for an interview, learners need to understand the different situations that may require interviews for example for a course, for a job or for voluntary work. The tutor or line manager could facilitate a question and answer session could determine a range of interview situations and the purpose of the interview in each case, for example an interview for a course is to ensure that the learner has selected a course which is appropriate for them and will enable them to succeed.

In order for learners to understand the appropriate presentation for interview and appropriate answers to interviewers' questions, it would be useful for them to watch a video of an interview or clips from films or popular television programmes that feature interview scenes. Learners could also discuss various interview scenarios to determine what is meant by appropriate presentation and ways to answer questions. The key points could be collated on a board or flipchart. Learners could make posters of the key points which could be displayed in the classroom or working area to act as reminder throughout the unit.

Tutors/line managers will need to make learners aware of cultural differences in non-verbal communication which would be relevant in an interview situation. Where different cultures and nationalities are represented in the group or learners have experience of other cultures, learners could also contribute ideas to the discussion. Examples could include cultural differences about whether or not to make eye contact with a senior or older person or whether or not to shake someone's hand at the beginning or end of an interview.

Learners could work in small groups to practise their verbal and non-verbal communication skills. Role-play scenarios could cover a range of interview situations for example for courses, jobs or voluntary work. Video cameras may be used to record the role-play and learners should be encouraged to assess their own skills in answering questions. Learners at this level may need considerable support from the tutor/line manager in evaluating their own performance.

The interview may be for a job, placement or place on a training course. It could be a real situation but a simulated interview is equally acceptable. The interview should last for no more than 10 minutes. The learner should be fully briefed about what to expect in terms of format, length and likely content. The interviewer should use straightforward language and make sure that questions are clearly phrased and easy to understand. Where possible, the interviewer should be familiar to the learner.

Assessment

Learners must be dressed appropriately for the interview context. The definition of 'appropriately' will differ from one workplace or course to another, depending on the nature of the job, placement or course applied for. The learner's appearance should be consistent with that normally expected of interviewees in the particular setting. Regardless of setting, learners should have paid attention to their personal hygiene and should be wearing clean clothes. Their choice of clothing may be based on the advice or guidance of others.

During the interview, the learner must demonstrate that they are paying attention, concentrating on what is being said and avoiding distractions.

Appropriate body language will indicate that the learner is listening to the interviewer and is interested in the discussion. To achieve 1.2, the learner needs to refrain from fidgeting or other behaviour that suggests that they are not concentrating on the interview. Tutors or line managers should assess the appropriateness of the learner's non-verbal communication in the light of any relevant cultural factors.

To achieve 2.1, the learner's answers may be brief and unsophisticated but they must contain clear, relevant information which demonstrates an understanding of the question.

Evidence to support observation of the learner's performance in the interview could take the form of a written statement by the tutor, line manager or interviewer or could be a video with supporting commentary from the tutor/line manager.

For 3.1, the learner must be able to identify one aspect of their performance that went well and one aspect that did not go so well. These might relate to particular questions or to aspects such as body language or careful listening. They might reflect on the interview by watching it back on video, listening to a recording or discussing it with the interviewer or other observers. It is appropriate for any of these parties to offer constructive criticism and for the learner to include this feedback in the review of their performance, should they wish to do so. However, from the given feedback, the learner must independently identify what they include in their evaluation. Evidence to support this can be either written, for example through written statements from the learner on the review of their performance and/or supporting statements from the tutor, line manager or other person involved in the discussion and review, or through video or taped discussion.

Essential resources

Learners will need the opportunity to participate in a real life or simulated interview.

Indicative resource materials

Websites

www.direct.gov.uk/en/Employment/Jobseekers/LookingForWork

www.jobcentreplus.gov.uk/jcp/Customers/outofworkhelplookingforwork/Getting_job_ready/Interviews

www.worksmart.org.uk/career/interviews

Unit 11: Managing your Health at Work

Unit code: M/501/6360

QCF Level: Entry 3

Credit value: 1

Unit aim

The aim of this unit is to help learners understand why it is important to be healthy at work and how to keep well at work.

Unit introduction

Much of our time is spent at work. Our work and how we work can have a huge impact on our physical and mental wellbeing. During time spent at work, workers can suffer from everyday ailments and aches and pains including headaches, back problems and stress. It is important that people know how to look after themselves whilst they are at work so that they can stay healthy and work effectively.

The aim of this unit is to help learners understand why it is important to be healthy at work and how to keep well at work. Learners will explore different types of health issues that could arise in different working environments.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know why it is important to be healthy at work	1.1 Describe why it is important to be healthy at work
2 Know how to keep healthy at work	2.1 Identify ways of keeping healthy at work 2.2 Identify different types of working environments and their possible health issues

Unit content

1 **Know why it is important to be healthy at work**

Importance of being healthy at work: eg work more efficiently, increased self-esteem, increased enjoyment of work, quality of work could suffer if worker is unhealthy, effects of unemployment on your health, the longer someone is out of work the harder it is to get back

2 **Know how to keep healthy at work**

Keeping healthy: appropriate equipment eg suitable chair, keyboard arm rests, foot rests; taking regular breaks; exercise; diet; adequate sleep, dealing effectively with stress

Health factors to consider in different work environment: different needs for different environments eg working in hospital, office, outdoors; different types of illnesses and injuries eg repetitive strain injury, colds, flu and other illnesses; temperature in work environment eg summer heat, cold, air conditioning, heating

Essential guidance for tutors

Delivery

During the delivery of this unit, learners should be given as much practical experience as possible. Delivery methods could include learner-centred tasks such as group-work and research tasks or learner-led presentations.

Group discussions could be used to identify the benefits of being healthy at work. Personal experience could be referred to (for example a learner may be able to share how they felt when they experienced unemployment due to ill health).

Speakers from different areas of work may be invited to talk to the group on the importance of keeping healthy at work. This may include reference to the benefits that a healthy workforce has for a company or organisation.

When discussing illnesses and injuries at work, it is important to make this as relevant as possible for the learner. If they have already been in work, they will be able to refer to experiences that they have encountered. However, this will be difficult for learners who have not had any previous work experience. One way to overcome this would be to refer to their classroom experiences or perhaps where they do work at home. Topics such as repetitive strain injury, posture, colds and flu could then be discussed in this context.

Websites may also be a good source of information. Learners could be encouraged to find out what is meant by repetitive strain injury, for example www.patient.co.uk.

The learner may be asked to extract information for example What causes RSI? How could it be prevented? Learners would not be expected to give detailed or lengthy answers to this type of question.

Learners should also be encouraged to think about how they can manage their health in different types of workplace environments, for example infection control is particularly important when working in a hospital, whilst wearing personal protective equipment (PPE) is essential when working on a building site. Learners could visit different work environments to find out about managing health in specific work areas or speakers could be invited to talk to the group.

Learners could ask friends or colleagues how they keep healthy. A simple questionnaire could be designed and the information gathered could be presented to the rest of the group. Alternatively, posters may be designed on how to manage health at work. The posters could then be displayed in the class or place of learning. This task could provide practice for Functional Skills if learners ensured that the information given was grammatically accurate and spelt correctly.

Assessment

In order to achieve 1.1, the learner must describe why it is important to be healthy at work. They should be able to give at least three reasons which benefit themselves and the employer. This could be assessed through a one-to-one discussion with the tutor, recorded by the tutor for verification purposes. Alternatively, the learner could produce a poster or leaflet to display their ideas.

To achieve 2.1, the learner must be able to identify three different ways of keeping healthy at work. The learner could produce a leaflet or poster showing different ways of keeping healthy at work. Alternatively, they may participate in a discussion which highlights how to keep healthy at work.

For 2.2, the learner must identify at least two different types of working environments and at least one associated health risk or issue for each type.

Essential resources

Learners will need access to appropriate information about how to keep healthy at work.

Indicative resource materials

Websites

www.direct.gov.uk/en/Employment/Employees/HealthAndSafetyAtWork

www.workingforhealth.gov.uk

www.worksmart.org.uk/index.php

Unit 12: Working Towards Goals

Unit code: J/502/0463

QCF Level: 1

Credit value: 2

Unit aim

To help the learner understand how to identify and work towards goals appropriately.

Unit introduction

This unit aims to help learners examine their strengths and weaknesses in relation to personal and social skills development. This is a practical unit designed to help learners identify realistic goals and work towards meeting at least one. Learners will explore and explain the benefits of achievement supported by a range of people to help them build on strengths and improve on weaknesses.

Learners' current areas of weakness will be self-evaluated, and assessed by both peers and tutors. Learners will be guided in identifying a range of appropriate sources of support and engage in structured activities which will lead to the success of a short-term goal, within a specific timescale. This will promote their independence in personal and working life. In order to identify how effective learners have been in following an agreed plan to achieve a short-term goal, learners will be encouraged to prepare an action plan, regularly review their activity progress and amend it where necessary.

Completing this unit will contribute to learners' overall personal and social development and develop Personal, Learning and Thinking skills in the areas of Independent Enquirers and Self Managers. It will foster skills necessary to become independent in decision making and encourage taking responsibility for planning, reviewing and achievement of short-term goals.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to identify and explain their goals	1.1 Describe own strengths and what they need to improve 1.2 Identify at least one goal which is important for their development 1.3 Explain why achieving the goal is important 1.4 Agree the goal with an appropriate person
2 Prepare an action plan to meet their goal	2.1 Identify the activities needed to work towards the goal 2.2 Identify timescales and deadlines for the achievement of the goal 2.3 Identify the resources needed to support them in achieving the goal
3 Be able to review progress towards achieving their goal	3.1 Follow the activities outlined in the action plan 3.2 Regularly review the activities and outcomes with an appropriate person 3.3 Identify what has been achieved and what still needs to be done 3.4 Amend the action plan to reflect their progress

Unit content

1 Be able to identify and explain their goals

Strengths and weaknesses: identifying own personal skills and qualities gained from education, work experience and other life experiences eg computer skills, numeracy, literacy, ability to relate to others, assertiveness, communication skills, reliability, trustworthiness, patience, friendliness, team skills, punctuality, emotional responses, time management, organisation skills

Goals: types of goal eg improving numeracy, literacy, IT skills, improving punctuality at school-college-work, grades, changing negative behaviour, developing specific communication skills and social skills, following a healthier lifestyle, creating a CV, preparing for placement, preparing for paid or volunteer work, identifying if goals are achievable and measurable

Importance of achieving goal: different ways achieving a goal can be important eg improved life chances and opportunities, self-esteem, confidence, wider range of options in work, education and social life, improved health and wellbeing, improved earnings, build relationships, join new social groups

Appropriate person to agree goal with: appropriate person eg careers adviser, tutor, support staff, colleagues, employer, peer group, sports coach, dietician

2 Prepare an action plan to meet their goal

Activities: types of activity eg attending training on offer by eg employer, job centre, college, school; joining healthy eating or lifestyle clubs eg diet group, self-help group, sports club or projects, attend study support; independent research eg building a CV applying for paid or voluntary work; recording activities eg create an action plan with staff, keep a diary of events, peer and self-assessment, create a code of conduct and agree rights and responsibilities

Timescales and deadlines: realistic and measurable goal; specific timescale for short-term goal; duration of activities

Resources: people eg careers adviser, job centre, tutor, support staff, colleagues, employer, peer group, sports coach; multi-media eg internet, library books, leaflets from health centres, local newspapers

3 Be able to review progress towards achieving their goal

Regularly review activities and outcomes: reviewing completed tasks through discussion with peers and professionals; diary reflection; checklists and questionnaires; tutorial paperwork

Essential guidance for tutors

Delivery

For learning outcome 1 learners could be encouraged to examine their own strengths and weaknesses in personal and social skills. Tutors could provide a SWOT analysis form and devise a checklist of skills and qualities which learners will complete in order to identify their own strengths and weaknesses.

Learners could reflect on their skills gaps and describe one area they believe would benefit their development. This could relate to college, work or personal life. Learners could use self, peer and tutor feedback, review paperwork, appraisal or supervision paperwork from workplace, if applicable, to support their description of areas which need development.

Once learners have identified areas for improvement they could be encouraged to set one realistic short-term goal and agree, with an appropriate person, a plan of working towards the achievement of the goal. Learners should be supported to identify the difference between long-term and short-term goals, this can be achieved by examining a range of case studies (real-life stories of achievement in the media, for example the magazine *Take a Break*). The tutor could give specific goals and ask the learners to produce a chart which outlines activities that are required in order to achieve the goal (hand out cards with a range of goals – for example losing 3lb in six weeks, creating a CV, planning a party).

Learners could be encouraged, after this, to compare peers' goals and identify activities that will be required in order to achieve their own goal. Learners could also be encouraged, through group discussion, to share their personal experiences of goal achievement, detailing the stages they had to go through in order to achieve the goal. The implied agreement must be defined by the tutor and learners should sign documentation to reflect agreement of their chosen short-term goal, with an appropriate person.

For learning outcome 2 learners could begin to create an action plan which outlines their goal, lists activities planned, identifies resources needed and includes a proposed date of completion. Tutors could encourage learners to identify what steps are required to achieve their specific goal, the use of case studies and recall of personal experiences can be used as a prompt for learners to consider typical stages of goal development.

Learners must be guided in selecting appropriate individuals and or specific resources that could support them to achieve their goal, for example a Connexions adviser, dietician, sports coach, relevant textbooks, leaflets and websites. A list of resources should be created by the tutor and given to the learner so they can identify relevant sources of information to use independently.

Learners should be made aware of the importance in allocating deadlines and working within specific timescales. They could be encouraged to consider the consequences of failing to meet deadlines through the use of case studies. Learners must estimate timescales for the achievement of their chosen goal and their action plan should reflect this. At this stage learners should be encouraged to start recording diary entries in order to view progress which links with learning outcome 3.

For learning outcome 3 learners could follow the activities outlined in their action plan and to amend appropriately wherever necessary. Monitoring of learners' progress will be necessary (tutors should identify at least three review dates with the learner in order to assess progress). Tutors should encourage learners to reflect on their action plan, diary entries, checklist results and discussion with peers, tutors and other support, in order to identify what has been achieved.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Introduction to unit and structure of the programme of learning.</p> <p>Tutor-led discussion – to clarify range of skills, qualities</p> <p>Activity – design checklist to use when assessing personal skills and qualities.</p> <p>Practical – use checklist to record own skills and qualities.</p> <p>Assessment – identify strengths and what needs to be improved on checklist.</p> <p>Group discussion –</p> <p>What are goals? Why are goals important?</p> <p>difference between short- and long-term goals</p> <p>need for to goals to be realistic.</p> <p>Guest speakers – to speak about personal goals set and achieved.</p> <p>Tutor demonstration – using SWOT (strengths, weaknesses, opportunities, threats) analysis to identify goals using a case study</p> <p>Practical – using SWOT analysis to identify personal goals.</p> <p>Assessment – record one goal for own development and reasons why achievement of goal is important. One-to-one tutorial to agree goal. (learning outcome 1) [Functional Skills Level 1 writing]</p>
<p>Tutor-led discussion – ‘What is action planning?’ ‘How to use action planning to help achieve goals?’ ‘Why do plans need to be reviewed and amended?’</p> <p>Group discussion – what should be included in an action plan? Agree an action plan template.</p> <p>Activity – use action plan template to record activities need to work towards agreed goal, timescales and deadlines for achievement</p> <p>Activity – present plans to group for peer assessment of feasibility.</p> <p>Research – resources needed to support achievement of goal.</p> <p>Assessment – record activities, timescales, deadlines and resources needed. (learning outcome 2)</p>
<p>Practical – carry out planned activities.</p> <p>One-to-one tutorial to review activities and outcomes.</p> <p>Assessment – record achievements and what activities still need to be done and make amendments to action plan. (learning outcome 3)</p>
<p>Assessment feedback, review and evaluation of unit</p>

Assessment

To meet the requirements of assessment criteria 1.1 and 1.4 learners could complete a checklist showing ranges 1-5 (1 being weak, 5 being strong) of their own personal and social skills, alongside a statement of their opinion on what areas need improvement, outlining the benefits of developing specific weaknesses. Learners could use tutor review paperwork, appraisal/supervision paperwork from workplace, if applicable, as supporting evidence. To meet 1.2, evidence of a discussion with the tutor outlining learners' chosen short-term goal could be produced. To achieve 1.4, documentation which reflects an implied agreement of short-term goal between the learner and tutor will be sufficient (documented evidence could include an informal contract or witness statement).

To meet the requirements of assessment criteria 2.1, 2.2 and 2.3, learners could complete an action plan which lists activities they will undertake in order to achieve their goal, identifies sources of support they will be using and outlines proposed completion dates for each activity.

In order to meet 3.1, learners could produce appropriate evidence which supports their action plan, so as to ascertain the activities that have been undertaken. This could be in the form of photographs, video footage, witness statements, employer feedback, review and tutorial paperwork. To achieve criteria 3.2 and 3.3, documented evidence of learners taking part in regular reviews with their tutor will be sufficient. To achieve criterion 3.4, an action plan, showing amendments made by the learner or appropriate others, should be produced.

Essential resources

Learners will need access to professionals who can support them in achieving specific goals (for example careers adviser, literacy or numeracy tutor).

Indicative resource materials

Websites

www.connexions-direct.com/index.cfm?pid=65

www.direct.gov.uk/en/Employment/Jobseekers/LookingForWork

www.fasttomato.com

www.lifecoachexpert.co.uk

Unit 13: Working as Part of a Group

Unit code: R/502/0465

QCF Level: 1

Credit value: 2

Unit aim

To help the learner develop skills to become an active contributor when working with others on group activities and to be able to review their own progress and skills development.

Unit introduction

This unit aims to help learners develop the skills required for working in a group through involvement in a group-work task. This includes being able to review the progress of the group and their own progress and skills development and to suggest ways they could improve.

This unit provides valuable opportunities for learners to build up skills that help to develop positive attitudes and are therefore very valuable in learning and employment. In addition, the skills required to work successfully as a group member are those which contribute to effective leadership. Good leaders must have a good idea of how a group works, what makes a good group and a good group worker. These skills include planning, taking turns in discussion, collaborating and cooperating, extending ideas through sharing with others, supporting and building on the contributions of others and receiving feedback.

In this unit learners will review their achievements, both as individuals and as a group and make suggestions for ways they could improve their group-work skills in a stress-free situation, providing opportunities for increased motivation and enhanced self-esteem.

For learning outcome 1, learners will establish the ground rules needed for group-work. There will be the opportunity for learners to take part in planning the group-work task and the individual activities needed to complete the group task.

Learners participate in a group task for learning outcome 2. They will be able to demonstrate they are able to work with others in a positive way to carry out individual tasks and achieve the aims of the group task. This includes: making suggestions appropriately, dealing with instructions, dealing with feedback, supporting others and requesting support from others, when needed.

For learning outcome 3, learners appraise the progress made by the group and their own contribution. They review aspects of the task that went well and those which were less successful. Finally, they propose ways they could improve their skills in working with others.

Completing this unit will contribute to the development of Personal Learning and Thinking Skills in the areas of Team Workers and Effective Participators, as well as contributing to the learners overall personal and social development. This unit relates to Level 1 key skills standards in working with others.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand how to contribute to working as part of a group in appropriate ways	1.1 Suggest appropriate ground rules for working with others 1.2 Contribute to the planning of group and individual activities
2 Demonstrate how to work as an effective group member	2.1 Work with others in a positive way to carry out individual and group activities 2.2 Make suggestions appropriately 2.3 Deal with instructions appropriately 2.4 Deal with feedback appropriately 2.5 Support others and ask for support when required
3 Review the group's progress and their contribution to it	3.1 Review the progress the group has made in working together 3.2 Describe how they contributed to the work of the group 3.3 Describe what went well and what went less well 3.4 Suggest how they could improve their skills in working with others

Unit content

1 Understand how to contribute to working as part of a group in appropriate ways

Establishing ground rules for working as part of a group: clear goals; ensuring everyone is listened to; respect others opinions and views; democratic decisions; sharing understanding of expected behaviour and attitudes; sharing tasks fairly; recognising individual strengths; taking ownership

Recognising skills and strengths to plan activities: organising skills; encouraging contributions from everyone; motivating others; punctuality; reliability; creativity; helping others; accepting help from others; accepting constructive criticism; practical skills eg computer literacy; honesty and openness; flexibility; maintaining confidentiality; individual activities eg researching and finding out about resources, travel, timetables, opening times, booking travel tickets, providing food, drinks, taking notes at meetings

2 Demonstrate how to work as an effective group member

Respect others' contribution: listening to ideas of other group members without interrupting; agreeing group decisions; following decisions of group

Contribute to group decisions: offering own ideas; suggesting solutions to problems faced by group; suggesting a better way of doing something; offering practical skills

Complete own task: following instructions for task; completing agreed task on time; completing task to satisfactory standard

Respond to feedback from others: accepting feedback positively; listening carefully; asking for clarification; asking for suggestions of ways to improve

Support other group members: asking other group members if they need help; showing group members how to do something; helping group members to complete their task; completing task for absent group member

Ask for support from others: asking for help eg when instructions need explaining, when clarification needed, to complete aspects of task

3 Review the group's progress and their contribution to it

Group progress in working together: group progress eg all members contributed, individual strengths recognised, communication skills developed, learnt to trust one another

Individual contribution to group task: individual contribution eg contributed ideas to planning, asked advice from another group member, helped another group member to complete their task

Successful aspects of group task: successful aspects eg all aspects of task completed, timeframe met, group task met aim, completed to a good standard

Less successful aspects of group task: less successful aspects eg some group members were absent, some individuals did not follow agreed instructions

Improving own skills in working with others: improving own skills eg learning about responding positively to feedback

Essential guidance for tutors

Delivery

The emphasis in this unit is on developing learners' skills in working as an effective member of a group through involvement in a practical group-work task.

To establish appropriate ground rules for group working, learners could work in small groups to analyse case studies of different group-work tasks, some which were more successful than others. A question and answer session could determine the reasons the success in the group-work, for example some people did not complete their tasks, some group members did not follow the group agreements. From this, key points could be collated on a board or flipchart. Learners could produce posters of group-working ground rules to display in the classroom for learners to refer to throughout the unit.

Identification of the group-work task, the group members and the individual activities is required at this stage of the unit. Learners could be involved in selecting the group task. Teams could be made up of around four to seven people. In groups, learners could discuss possibilities for appropriate tasks and report back to the whole class. Learners could develop a discussion to decide which group-work tasks are manageable, achievable and match the skills and interests of the group members in 'what if' scenarios.

The groups could work together to produce a clear plan to include all tasks involved in the group-work, the roles and responsibilities of all individuals and timescales. The tutor will need to use prompts to help the group to develop this plan to ensure all activities and roles for each group member have been included. This could be presented as a mind map or a colour-coded flow chart to act as an aid memoir during completion of the group-work task.

For learning outcome 2, learners need to implement the agreed group-work task. Learners could work in groups to devise a checklist to log the group-work skills they demonstrate during the task.

Learners should be encouraged to review their own performance in the group-work task for learning outcome 3, using evidence from their checklist. This needs to include the effectiveness of their individual group-work skills and how their individual contribution affected the success of the overall group-work task. Ways for learners to develop their group-working skills could be explored through tutorials or small group discussions.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Introduction to unit and structure of the programme of learning.</p> <p>Case studies – compare case studies of group-work tasks, some which were more successful than others.</p> <p>Group discussion – ‘Why were some tasks less successful? ‘What are the features of successful group-working?’</p> <p>Activity – watch DVDs or videos of group-work, for example <i>The Apprentice</i>, to consider the skills and strengths of individuals which contribute to success in group-work tasks.</p> <p>Team-building activities.</p> <p>Tutor-led discussion – issues to consider when choosing a group-work task:</p> <ul style="list-style-type: none"> • manageable in time scale • costs • provide opportunity for all to be involved • match the skills and interests of group members. <p>Activity groups discuss and select options for group-work task.</p> <p>Group tutorials to agree group-work task.</p> <p>Activity – groups plan task and allocate activities.</p> <p>Record plan and activities on a time line. Provide a copy for all group members.</p> <p>Assessment – witness statements to support contribution to discussions for suggestions of ground rules, and flexible contribution to planning decisions. (learning outcome 1) [Functional Skills Level 1 Speaking and Listening]</p>
<p>Activity – group-working skills – design a format to log group-working skills and their contribution as a group member.</p> <p>Practical – carry out group-work task. Record progress and skills used during task.</p> <p>Group tutorials to monitor progress.</p> <p>Assessment – present evidence of group-work skills identified in unit content in agreed format. (learning outcome 2)</p>

Topic and suggested assignments/activities
<p>Tutor-led discussion – ‘What is the value of by reviewing the progress made by the group during the task?’ ‘How may individuals benefit from assessing their contribution to the task?’</p> <p>Activity – group review of progress made during group task.</p> <p>Activity – individual review of own contribution to group task and ways to improve skills in working with others.</p> <p>One-to-one tutorial to review individual contribution to group, successes, what did not go well and how to improve in working with others.</p> <p>Assessment – record assessment of group’s progress, own contribution and ways to improve skills in working with others. (learning outcome 3)</p>
Assessment feedback, review and evaluation of unit.

Assessment

For assessment criterion 1.1, learners will need to list at least five ground rules required for working with others. This may be evidenced in a number of different ways, for example a leaflet, presentation or poster.

For assessment criterion 1.2, learners will need to play a part in the planning or the whole group-work task and the allocation of individual activities. This may be presented in the form of a record of group discussions. The contribution of individuals will need to be identified and assessed which may be through witness statements, peer group assessment or by the tutor. To meet the requirements for 1.2, documentation will need to be retained for internal and external verification.

The evidence required for assessment criteria 2.1, 2.2, 2.3, 2.4, 2.5 may be provided by a checklist completed by the learner during the task. The checklist may take a variety of formats. The checklist will need to be verified by the tutor. Alternative methods of evidencing may be used, for example an observation or video recording.

For assessment criterion 3.1 learners need to assess how well the group-worked together during planning and completing the group-work task. Learners may use the checklist completed during the task to review their own group-working skills for 3.2 and 3.3. For 3.1 learners need to give brief detail about how they contributed to the work of the group. For 3.3 the learner will need to give brief detail about one aspect of their group-work task which went well and one aspect which was less successful. For 3.4, more than one way for the learners to develop their skills in working with others could be explored through one-to-one discussion with the tutor. Responses should be recorded for verification purposes.

Essential resources

Learners will need the opportunity to work as part of a group.

Indicative resource materials

Website

[www.shropshire.gov.uk/effectivepractice.nsf/viewAttachments/SERS-743B6D/\\$file/suitcase-game.pdf](http://www.shropshire.gov.uk/effectivepractice.nsf/viewAttachments/SERS-743B6D/$file/suitcase-game.pdf)

Shropshire Council

Effective Practice in Education

Unit 14: Care of Farm Animals

Unit code: M/502/4538

QCF Level: Entry 3

Credit value: 6

Unit aim

The learner will develop confidence and skills that are required on a daily basis on livestock farms through a range of tasks associated with observation, safe moving, treating, cleaning and preparing a new environment for farm animals. In this unit, use of the term ‘farm animals’ relates to cattle or sheep or pigs.

Unit introduction

The purpose of this unit is to develop the skills needed on any livestock enterprise where cattle or sheep or pigs are kept, whether a smallholding or larger commercial farm.

The tasks that learners will undertake include the daily checking of livestock, any specific treatment necessary and the associated moving of the animals, feeding and watering, and cleaning and preparing accommodation for animals.

It is envisaged that learners will experience a range of tasks with a variety of different animals, especially calves and sheep. Pigs would also be useful if available. Sheep, calves and piglets are relatively easy to handle, and learners should gain confidence in working with these in order to work with larger animals such as dairy and beef cattle. Working with rams is not recommended.

It is a requirement that risk assessments are undertaken before work commences and that learners wear appropriate PPE at all times.

The suggested tasks for the unit outcomes can be undertaken for assessment purposes quite easily and on a number of occasions, so that a useful learner profile can be built up. The tasks are not exhaustive by any means, but reflect real-life situations on livestock farms. The tasks will develop learner skills in animal observation as well as health and safety awareness.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know different farm animal gender types	1.1 Recognise different farm animal gender types
2 Know signs of health in farm animals	2.1 Recognise signs of health in farm animals
3 Be able to assist with moving farm animals safely	3.1 Assist with moving farm animals from one place to another
4 Be able to assist with basic treatment of farm animals	4.1 Assist with basic treatment of farm animals
5 Be able to assist with feeding and watering farm animals	5.1 Assist with preparing food for farm animals 5.2 Assist with feeding and watering farm animals
6 Be able to assist with cleaning out and preparing new accommodation for farm animals	6.1 Assist with cleaning out a pen used to accommodate farm animals 6.2 Assist with preparing a pen used to accommodate farm animals
7 Be able to work safely with farm animals	7.1 Maintain a safe and tidy working environment 7.2 Identify hazards when working with farm animals in order to reduce risks

Unit content

1 Know different farm animal gender types

Types of farm animals: dairy cattle eg calves, heifers, cows, bulls; beef cattle eg cows, bulls, steers (bullocks); sheep eg ewes, rams, lambs; pigs eg sows, boars, gilts, piglets

2 Know signs of health in farm animals

Signs of good health: head eg eyes, nose, ears, teeth; body eg coat, fleece, feet; excreted material eg dung, urine; eating eg grazing, ruminating

Signs of ill health: eg cloudy/runny eyes, irregular breathing, scabs, rough coat, open/coarse wool, isolated, not eating, thin, limping

3 Be able to assist with moving farm animals safely

Moving farm animals: keep animals together, move at correct pace; count animals eg cattle in a field or pen, sheep loaded onto lorry; stress of animals when moving eg loading onto a vehicle, pushing through a narrow gateway, weighing cattle in a crush; health and safety of operator and animals; current, relevant legislation and codes of practice

4 Be able to assist with basic treatment of farm animals

Basic treatment: footbath, chemicals; relevant methods of treatment eg oral drench, pour-on; health and safety of operator and animals

5 Be able to assist with feeding and watering farm animals

Recognise and prepare food for feeding: eg hay, silage, straw; recognise concentrates eg pellets, coarse mix; interpret instructions from bag; milk powder eg correct temperature, amount; containers eg scoop, bucket; bagged feed eg correct weight, manual handling

Feeding farm animals: eg cattle, sheep, pigs, calves, orphan lambs; feed concentrates eg in field troughs, on floor in a pen; prepare equipment for feeding eg hay racks, ring feeders

Watering farm animals: water equipment eg troughs, bowl drinkers, nipple drinkers, pipe, stop tap, water tap, ball-valve; water quality eg cleanliness

6 Be able to assist with cleaning out and preparing new accommodation for farm animals

Clean pen: remove soiled bedding eg muck fork, wheelbarrow, tractor bucket; remove string and plastic; move muck to muck heap

Prepare fresh bedding: select appropriate straw; spread appropriate amount; health and safety issues eg use of muck fork, dust mask, animals in same pen when bedding down

7 Be able to work safely with farm animals

Safety: keep work area free of potential hazards that could cause injuries to the group, the animal or others; risk assessment; PPE and hygiene precautions; current, relevant legislation

Essential guidance for tutors

Delivery

Access to a farm is essential.

All assessments are designed to be practical and can take the form of individual assessments or witness statements.

The unit is designed to give learners maximum opportunity to practise looking after stock, covering the three basic essentials of feeding, health and providing the correct environment, and to give learners as much hands-on experience as possible, working in a team or individually.

Correct PPE will be necessary at all times.

Learning outcome 1

Recognition of farm animal gender types could be carried out during an induction or initial tour of farm enterprises, followed up by specific practicals such as checking stock in a field or a pen when housed, bringing cows into a milking parlour, moving animals from one field to another, or loading animals onto a vehicle.

A visit to a local livestock market is an excellent means of experiencing different gender types of livestock. It would also form a useful introduction to animal breeds.

Learning outcome 2

Each time learners work with stock they need to develop observation skills for recognising signs of health and ill health. Practice should be given on every occasion, with structured observation of good health and ill health and general animal behaviour as well as during work on other learning outcomes, so that gradually health checking becomes second nature. Ample opportunities should therefore be given before assessment is carried out.

Learning outcome 3

Learners should assist with moving different animals wherever possible, such as fetching cows from a field for milking, bringing sheep into a handling area for foot-bathing or other treatment, loading lambs onto a lorry to go to an abattoir, or simply moving stock from one field to another. This will give learners the chance to gain confidence in being amongst and handling farm animals, especially large cattle. A lambing shed offers numerous chances to practise and be assessed moving animals.

Learning outcome 4

Learners should assist with basic treatments at specific times of year, such as in a lambing shed, when cows are calving, rearing calves up to and beyond weaning, bringing lambs in for worming or pour-on against fly strike.

Risk assessments should always be carried out before treatments, as well as maintaining tidiness and correct waste disposal in order to instil concepts of good practice.

Learning outcome 5

A tour of various farm livestock enterprises is useful in order to note the different feeds used. Learners should be shown a silage clamp with grass and/or maize, if possible, in order to recognise the difference. Other stores include hay and straw barns for different sized bales, and forage bales that are plastic wrapped. Learners should list all the different feeds on the farm and then classify them according to whether they are made on the farm, whether from grass or maize, whether they are wet (silages) or dry (hay, concentrates), in order to introduce the concept of feed classification. At the same time, learners should note the different types of feeding equipment (manual and mechanical).

Where silage is fed, learners should practise using a shovel or fork to keep the forage pushed up in front of the stock, and should be aware of the various types of feed barriers and how stock feed. They should also be present to witness forage feeders in action if possible.

During the grazing seasons, learners should be given the opportunity to observe stock behaviour when grazing and compare dung pats and water troughs. Measuring grass height to ascertain feed levels can develop numeracy skills. Counting stock and calculating stocking rates are also useful skills that lead into mathematical calculations.

Learning outcome 6

A calf or lambing pen is useful to practise with routine cleaning out and bedding down for new arrivals. Cleaning out a small sheep or calf pen can be carried out manually and relatively quickly as opposed to using a forklift or fore-loader that tends to be used for larger pens. Learners should be shown the importance of removing any baler twine or plastic wrap from among the soiled bedding and to understand why they do not rot down in a muck heap.

Learners should also be shown what happens to muck and how it plays a part in the recycling process (the concept of ‘sustainability’). Viewing a slurry store, muck heap and the muck spreading process will provide useful background knowledge.

Learning outcome 7

Health and safety, as well as animal welfare issues, must be addressed before learners visit a farm unit. Risk assessments should be carried out each time a practical session takes place.

Learners must always wear appropriate PPE. Any bio-security measures should be explained and enforced.

For visits to markets and other farms learners should dress appropriately to reflect good practice.

Hygiene and general cleanliness should also be enforced regularly in order to protect learners.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Tour of farm livestock enterprises; name the various types of farm animals and recognise genders.
Inspect stock in field and/or in housed accommodation for signs of health and ill health; repeat several times.

Topic and suggested assignments/activities
<p>Move various animals such as: cows from field to the milking parlour, sheep from field to handling area for treatment, cattle/sheep from accommodation to area for weighing, ewes from lambing pen to individual pen, calves from group/individual pens to weaned pens, loading stock onto lorry.</p> <p>Assessment can be carried out during the above tasks or separately.</p>
<p>Basic calf tasks, eg haltering, taking temperature, preparation for an injection, weighing; assist with sheep tasks, eg weighing lambs, foot-bathing, assisting with drenching or a pour-on; assist with pig tasks eg assist with clipping teeth, stomach tubing, assist with injecting iron, weighing.</p> <p>Assessment can be carried out during any of the above tasks.</p>
<p>Tour farm enterprises, eg to note the different feeds used, inspect silage clamps, barns of hay or forage; list the different feed types stored on the farm; note the equipment used to feed (both manual and mechanical, such as 'Keenan' feeders, forklifts, fore-loaders).</p>
<p>Feed animals, eg recognise forages and concentrates; feeding animals outside in troughs or in sheds; mixing calf milk powder; bottle feeding orphan lambs; feed ewes concentrates before and after lambing, observing cows at grass or feeding indoors.</p>
<p>Clean out accommodation: remove soiled bedding from calf or lambing pens, use a muck fork or mechanical means, disinfect where appropriate, check muck has no string or plastic in it, clean out water troughs and bowl drinkers.</p> <p>Assessment can be carried out during tasks or separately.</p>
<p>Waste material: observe where muck and other organic waste is stored eg slurry stores, muck heaps, what will happen to it, spread muck where appropriate or observe the operation; observe machinery used for muck management.</p> <p>Assessment can be carried out during tasks or separately.</p>
<p>Assessment could be carried out during any of the above tasks either at the start, during or at the end of a class.</p>

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, learners need to recognise male animals (for example entires, castrates) and female animals (for example heifers, cows, ewes, sows) from at least one species (cattle, sheep, pigs).

To achieve 2.1, learners need to state at least two signs of health in any species of farm animal.

To achieve 3.1, learners must be able to assist with moving one type of farm animal safely and without undue stress. This should be carried out after sufficient practice. If learners are assessed when working as a team, for example by moving sheep from a field, the assessment needs to evidence their individual skill.

To achieve 4.1, learners must be able to assist with the basic treatment of farm animals, for example a footbath for sheep: mixing the chemical, calculating the dilution rate correctly (use for numeracy skills also) and foot-bathing the sheep. Learners should be able to fill a syringe with a vaccine, or other Vet Med, calibrate, and clean a drench gun or pour-on.

To achieve 5.1, learners must be able to differentiate forages, for example hay, silage and straw. They should recognise concentrates in the form of pellets/creep feed/dairy cake. They should also be able to mix correct quantities of milk powder for young animals.

To achieve 5.2, learners need to be able to assist with feeding specified farm animals. This could involve any of the following: bottle feeding lambs, feeding milk to calves in a bucket or other container, filling up hay racks or troughs with pellets. Learners must ensure the water provision is clean for stock and show how to clean out a trough.

To achieve 6.1, learners must be able to assist with cleaning out a pen of soiled bedding using appropriate equipment and showing that they understand why string and plastic should be removed.

To achieve 6.2, learners need to assist with selecting appropriate bedding material and bed down a given pen.

To achieve 7.1, learners must be able to maintain a safe and tidy working environment. This may be as a result of their having washed and swept a yard where stock were standing.

To achieve 7.2, learners must be able to identify at least two hazards when working with farm animals and state how the risks can be reduced.

Essential resources

Access to farm livestock, such as a college farm, other commercial farm or farm park.

Suitable handling and veterinary equipment.

Fields where livestock are kept.

Housing where livestock are kept.

Local livestock market.

Manure handling.

Employer engagement and vocational contexts

Visits to commercial farms and livestock markets will help learners to develop an understanding of the vocational context and future employment possibilities.

Indicative resource materials

Textbooks

Bazeley K and Hayton A – *Practical Cattle Farming* (The Crowood Press, 2007)
ISBN 9781861269751

Cardell K – *Practical Sheep Keeping* (The Crowood Press, 1998) ISBN 9781861261632

Fuller R – *Suckled Calf Production* (Chalcombe Publications, 1998) ISBN 9780948617409

Hulsen J – *Cow Signals* (Roodbont, Netherlands, 2007) ISBN 9789075280654

Smith P – *Practical Pig Keeping* (The Crowood Press, 2001) ISBN 9781861263889

Journals

British Sheep booklet (National Sheep Association publication)

Farmers Guardian

Farmers Weekly

Websites

www.fwi.co.uk

www.nationalsheep.org.uk

Unit 15: Maintain the Safety of Self and Others in the Workplace

Unit code: R/600/0291

QCF Level: 1

Credit value: 4

Unit aim

This unit is designed to develop the knowledge, skills and understanding to ensure that health and safety becomes part of routine working practices; to build habits of working with regard for personal safety and that of others, and if an emergency does occur to know what to do and who to report to.

Unit introduction

Health and safety form an integral part of all work roles in modern working environments. Attention to health and safety in any workplace is vital in reducing accidents and lowering risk.

This unit is designed to give learners an understanding and knowledge of safe working practices, relevant legislation, their responsibilities for working safely, and emergency procedures in their chosen area of work.

This understanding and knowledge will inform safe ways of working when learners carry out common practical tasks relevant to their chosen area of work.

The delivery and assessment of this unit should be as practical as possible and relevant to learners' chosen area of work.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know the current health and safety legislation and codes of practice that apply to own areas of work	1.1 Give two examples of current health and safety legislation and outline one responsibility for each that applies to own area of work 1.2 Identify who accidents, incidents or problems should be reported to in own area of work and why this is necessary

Learning outcomes	Assessment criteria
2 Understand the risks to health and safety in own area of work	2.1 Give at least three examples of specific hazards in own work situation 2.2 Identify who else might be affected by the hazards 2.3 Outline what measures could be taken in own work situation to eliminate hazards or reduce the chance of them causing harm
3 Be able to prepare to work safely	3.1 Select and wear appropriate protective clothing 3.2 Clean and tidy the work area before starting work, taking immediate steps to reduce any hazards if identified 3.3 Select and organise tools, materials and equipment before use 3.4 Follow guidance/instructions to warn others that work is about to start and of any hazards this may cause
4 Be able to work safely	4.1 Follow safety procedures and/or training to ensure the health and safety of self and others 4.2 Prepare and use equipment and/or materials safely and correctly as instructed 4.3 Demonstrate safe lifting and handling techniques and use of handling equipment if appropriate 4.4 Follow guidance/instructions to minimise environmental damage during work
5 Leave the work area in a safe condition	5.1 Clear and tidy the work area after use 5.2 Dispose of waste safely and correctly in a designated area as directed 5.3 Clean and store tools, equipment and PPE after use as directed
6 Know what to do in emergencies	6.1 State what actions to take in the event of two different types of emergency that might happen in own workplace 6.2 State who is responsible for dealing with each type of emergency and who and/or where to report to

Unit content

1 **Know the current health and safety legislation and codes of practice that apply to own areas of work**

Relevant legislation: eg Health and Safety at Work Act 1974 (HASAWA)

Codes of practice: relevant to sector eg PUWER, FEPA, COSHH

Accidents, incidents, problems: reporting and procedures

2 **Understand the risks to health and safety in own area of work**

Hazards: eg falling objects, sparks, dust, trip hazards, slip hazards, lifting, carrying

People: eg workers, supervisors, visitors, members of the public

Eliminating hazards: eg alternative ways of working, different equipment

3 **Be able to prepare to work safely**

Protective clothing: eg overalls, boots, goggles, ear defenders, gloves, dust masks

Tools, materials and equipment: preparation of tools appropriate to the tasks to be undertaken and in accordance with instructions

4 **Be able to work safely**

Training: sector-specific procedures and practices, location-specific procedures and practices, first aid procedures, fire regulations

Safe lifting and handling techniques: training, supervision, provision of lifting aids

5 **Leave the work area in a safe condition**

Waste disposal: correct procedures to minimise environmental damage, meeting legal requirements

6 **Know what to do in emergencies**

Emergencies: eg accident, fire, flood

Emergency procedures: responsibilities, reporting

Essential guidance for tutors

Delivery

This unit can form an integral part of standard working practices in any agricultural, horticultural, equine or small animal care setting. Learners will be able to develop transferable skills they can apply to a variety of workplace settings.

Learning outcome 1 can be delivered through classroom activities where learners can research and discuss, with tutor assistance, different pieces of health and safety legislation that are relevant to their area of work.

Learning outcome 2 can be delivered through classroom activities where learners can identify potential hazards from their work situation and discuss these with peers and tutors to identify hazard reduction methods.

Learning outcome 3 should be delivered in a practical setting where learners can take greater responsibility for their work, following tuition and coaching.

Learning outcome 4 should be delivered in a practical setting where learners can take greater responsibility for their work, following tuition and coaching.

Learning outcome 5 should be delivered in a practical setting where learners can take greater responsibility for their work, following tuition and coaching.

Learning outcome 6 can be delivered theoretically in a workplace context. Learners can identify relevant actions in familiar settings such as a work experience placement or a centre's own facilities. The emergencies should be those likely to be found in the learner's chosen sector.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Learning outcome 1 – Classroom-based activities for learners to be introduced to health and safety legislation and how it impacts on their chosen area of work. This should be followed by more specific instruction on how legislation and ways of working impact on the relevant vocational unit(s).
Learning outcome 2 – Classroom-based activities that introduce learners to the risks to health and safety in their own area of work, how these may be managed and who else may be affected. These activities should be related to the relevant vocational unit(s).
Learning outcome 3 – This outcome could be delivered as an integral part of other practical units on the programme of study. Most practical tasks will require elements of preparation for safe work and naturally occurring opportunities should be fully exploited, rather than making health and safety a separate topic.
Learning outcome 4 – This outcome could be delivered as an integral part of other practical units on the programme of study. All practical tasks will require elements of safe work and naturally occurring opportunities should be fully exploited, rather than making health and safety a separate topic.

Topic and suggested assignments/activities
Learning outcome 5 – This outcome could be delivered as an integral part of other practical units on the programme of study. Most practical tasks will require elements that relate to leaving the work area in a safe condition and naturally occurring opportunities should be fully exploited, rather than making health and safety a separate topic.
Learning outcome 6 – Classroom-based activities that introduce learners to emergency procedures relevant to the vocational unit they are undertaking. Some simulation of emergency procedures would be appropriate as a teaching tool to enable learners to complete the required assessment activities.

Assessment

For 1.1, learners are required to give two examples of current health and safety legislation and outline one responsibility for each that applies to their own area of work. Assessment for this criterion could take the form of a poster to be put up in the workplace to inform visitors of the legislation that applies in the environment they are visiting.

For 1.2, learners are required to identify to whom accidents, incidents or problems should be reported in their own area of work and why this is necessary. This criterion could be assessed through the production of an information sheet as part of an induction pack for a new employee that containing the required information about reporting requirements.

For 2.1, learners are required to give at least three examples of specific hazards in their own work situation. Assessment for this criterion could take the form of a structured worksheet or a tutor record of discussion with the learner, where the learner could state three examples of specific hazards.

For 2.2, learners must identify who else might be affected by the hazards. Assessment for this criterion is likely to be linked to that for 2.1, and learners can state on the same worksheet or in the same discussion with the tutor who else might be affected by the three hazards given as examples for 2.1.

For 2.3, learners must outline what measures could be taken in their own work situation to eliminate hazards or reduce the chance of them causing harm. Assessment for this criterion could be linked to that for 2.1 and 2.2, using the examples learners give. Similarly, the form of assessment could be followed through, using either a worksheet or tutor record of discussions. It is essential that both aspects of this criterion are addressed in learner work and it would be expected that learners refer to all three specific hazards in their responses.

For 3.1, learners are required to select and wear appropriate protective clothing. Authenticated photographic evidence showing learners wearing different types of protective clothing would be appropriate for this criterion. Alternatively, a tutor observation record could be used.

For 3.2, learners are required to clean and tidy the work area before starting work, taking immediate steps to reduce any identified hazards. Assessment for this criterion could take the form of a work diary to record practical tasks undertaken for other vocational units which involve learners cleaning and tidying the work area before starting work and taking immediate steps to reduce hazards. It may be appropriate to use simulation to prepare learners for assessment and to continue the simulation if insufficient naturally occurring opportunities present themselves for learners.

For 3.3, learners are required to select and organise tools, materials and equipment before use. Assessment for this criterion could take the form of a work diary to record practical tasks undertaken for other vocational units which involve learners selecting and organising tools, materials and equipment before use. The work record should be authenticated by the supervising tutor and cover a range of tools, materials and equipment appropriate to the learner's area of work.

For 3.4, learners are required to follow guidance/instructions to warn others that work is about to start and of any hazards this may cause. As for 3.2 and 3.3, a work diary could include evidence for this criterion and it should be authenticated by the supervising tutor. Learners should have the opportunity to demonstrate achievement of this criterion through several different practical tasks relevant to their own area of work, possibly in line with some of the hazards identified in learning outcome 2.

For 4.1, learners must follow safety procedures and/or training to ensure the health and safety of self and others. Continuous assessment would be appropriate for this criterion. Learner work diaries, authenticated by the supervising tutor to confirm that learners have followed the appropriate procedures, would be a suitable form of evidence.

For 4.2, learners are required to prepare and use equipment and/or materials safely and correctly as instructed. Similarly to 4.1, continuous assessment using authenticated learner work diaries would be appropriate, demonstrating that learners can use a range of equipment and materials appropriate to their own area of work.

For 4.3, the learners should demonstrate safe lifting and handling techniques and use of handling equipment if appropriate. Depending on the learner's area of work, different opportunities will arise. Appropriate use of naturally occurring opportunities to achieve this criterion, such as moving feed bags, bales of straw or hay and pieces of machinery, should be captured using photographic evidence or tutor observation records. Witness statements from supervisors in work experience placements could also be used as evidence.

For 4.4, learners are required to follow guidance/instructions to minimise environmental damage during their work. Tutor observation records to confirm that learners have met this criterion, for several tasks where environmental damage may be possible through different actions, would be appropriate.

For 5.1, learners are required to clean and tidy the work area after use. Assessing this criterion at the same time as routine practical work in the learner's chosen area of work would be appropriate. Learner work diaries, authenticated by the supervising tutor, would be an appropriate form of assessment, possibly in conjunction with 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.3 and 4.4. Photographic evidence may also support this criterion.

For 5.2, learners are required to dispose of waste safely and correctly in a designated area as directed. Assessment for this criterion could take the same form as for 5.1.

For 5.3, learners are required to clean and store tools, equipment and PPE after use as directed. Assessment for this criterion could take the same form as for 5.1.

For 6.1, learners are required to state what actions to take in the event of two different types of emergency that might happen in their own workplace. Assessment evidence could take the form of a structured worksheet for learners to complete, which states two different types of emergency relevant to their own area of work. This may be supported by group discussion and tutor questioning, providing assessment evidence is produced by learners individually.

For 6.2, learners must state who is responsible for dealing with each type of emergency and who and/or where to report to. Assessment could take the same form as that for 6.1 where learners complete a structured worksheet, continuing with the two different types of emergency used for that criterion.

Essential resources

Learners should have access to vocationally relevant settings, such as an animal unit, farm or horticultural enterprise, in which a variety of practical tasks will be carried out, presenting varied opportunities to meet the requirements of this unit. Centres should also provide sufficient equipment and materials so that learners can demonstrate competence over time and several opportunities to carry out the same practical task, similarly to demonstrate competence over time.

Sufficient resources for the more theoretical aspects of the unit, such as computers, classroom space and health and safety books, leaflets and posters should also be available for learners.

Employer engagement and vocational contexts

Learners should be able to develop transferable skills, in terms of safe working practices and compliance with health and safety legislation, that they can use in the workplace either during work experience placements or in employment on completion of the course.

Indicative resource materials**Textbooks**

Tutors should source suitable textbook resources relating to health and safety that support the sectors in which learners are working.

Website

www.hse.gov.uk

Unit 16: Assist with the Maintenance of Equipment

Unit code:	F/502/4608
QCF Level:	1
Credit value:	3

Unit aim

The learner will be able to assist with the maintenance of tools, equipment and machinery using hand tools and comply with all health and safety requirements.

Unit introduction

This unit is designed to cover the agricultural, horticultural and small animal care sectors. The assessment criteria relate to key parts of the maintenance processes for the different equipment used in the sector being studied. The unit covers the maintenance of mechanical and manual equipment using hand tools and appropriate materials.

Learners are expected to work with the equipment relevant to, and within the legislation and codes of practice for, their sector. It is not expected that learners will cover equipment, legislation or codes of practice for each sector included in this unit.

The unit assesses learners in three stages: the preparation of equipment for maintenance, the process of maintenance and the ability to work safely.

On completion of the unit it would be expected that learners could maintain equipment relevant to their sector under instruction and some supervision.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with the preparation of equipment for maintenance under supervision</p>	<p>1.1 Check that the equipment requiring maintenance is safe in accordance with instructions</p> <p>1.2 Keep the work area safe and in a condition suitable for the maintenance procedure</p> <p>1.3 Obtain the necessary hand tools and materials for maintenance in accordance with instructions</p> <p>1.4 Complete the preparation of equipment for maintenance in accordance with instructions</p>
<p>2 Be able to assist with the maintenance of equipment under supervision</p>	<p>2.1 Maintain manual and mechanical equipment in accordance with instructions</p> <p>2.2 Clean and store tools correctly after use</p>
<p>3 Be able to work safely</p>	<p>3.1 Maintain health and safety in accordance with relevant legislation and codes of practice</p> <p>3.2 Correctly identify and report any hazards</p> <p>3.3 Dispose of waste safely in accordance with instructions</p> <p>3.4 Carry out the work in a manner which minimises any environmental damage</p>

Unit content

1 Be able to assist with the preparation of equipment for maintenance under supervision

Identification of maintenance requirements: routine maintenance, emergency maintenance; cleaning

Preparation of equipment: provision of spare parts; availability of suitable working space; availability of tools and equipment for use during maintenance

Safe working area: warning signs; management of the working area; correct use of tools

Hand tools and materials: eg spanners, sockets, screwdrivers, hammer, saw, pliers, wire brushes, disinfectants, detergents

2 Be able to assist with the maintenance of equipment under supervision

Equipment: eg spades, forks, shovels, trowels, scrapers, lawnmowers, strimmers, wire strainers, post drivers, pumps, heaters, siphons, dustpans, brooms, brushes

Tools: cleaning, storage, safety, security

3 Be able to work safely

Legislation and codes of practice: eg COSHH, PUWER, HASAWA 1974, FEPA, Control of Vibration at Work Regulations 2005, Control of Noise at Work Regulations 2005

Reporting hazards: types of hazard, who to report hazards to

Waste disposal: hazardous, non-hazardous, organic, inorganic, environmental considerations; equipment; methods

Minimising environmental damage: disposal of waste products, disposal of consumable or worn parts

Essential guidance for tutors

Delivery

This unit would best be delivered through a combination of demonstrations and the use of naturally occurring evidence. It is anticipated that learners would be required to assist in the routine maintenance of equipment, which can be scheduled into a delivery plan, but also that there would be naturally occurring opportunities to assist in the emergency maintenance of equipment when necessary. Routine maintenance such as servicing or cleaning is normally carried out after equipment has been used. The delivery and assessment of this unit could feasibly take place as part of the work process of other related units where equipment is used.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Learners introduced to the knowledge, procedures and working practices that relate to the maintenance tasks to be carried out in their chosen sector. This could include health and safety issues, correct use of hand tools, how to work within appropriate pieces of legislation and codes of practice, hazard reporting and environmental issues.
Supervised practical work for learners to develop the skills required to maintain the equipment relevant to their chosen sector. Learners will receive supportive and developmental coaching to enable them to perform to the appropriate standard for the equipment being maintained.
Practical work to allow for more formal assessment opportunities where learners are able to work more independently to achieve the assessment outcomes, in line with instructions issued by tutors.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks specifically designed with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit. Similarly, where there are unplanned assessment opportunities, witness statements, observation records and photographic evidence are all appropriate. There are many opportunities for the elements of this unit to be assessed in conjunction with each other, and in conjunction with other units in the programme of study.

For 1.1, learners must check that the equipment requiring maintenance is safe to work on, for example disconnected from electricity supply, no dangerous sharp edges. A logbook supported by signed observation records would be an appropriate form of assessment.

For 1.2, learners must keep the work area safe and in a condition suitable for the maintenance procedure. It would be expected that this would be assessed through observation records and photographic evidence as an integral part of working processes that learners are involved in.

For 1.3, learners must obtain necessary hand tools and materials for the equipment to be maintained in accordance with instructions. This may be as diverse as disinfectants or detergents for tools used for small animal care, to spanners or screwdrivers for equipment used in the horticultural or agricultural sectors. Tutors should give clear instructions as to the tools and/or materials required for the specified maintenance task. An observation record from the tutor to confirm that learners have obtained the necessary tools and materials would be an appropriate form of assessment.

For 1.4, learners must complete the preparation of equipment for maintenance in accordance with instructions. An observation record or witness statement stating that learners have carried out the tutor or supervisor's instructions would be an appropriate form of assessment.

For 2.1, learners are required to maintain manual and mechanical equipment in accordance with instructions. Assessment for this criterion needs to recognise the requirement for both manual and mechanical equipment. The opportunities for this will vary with the sector, but as a minimum learners should maintain one item of manual equipment and one item of mechanical equipment in accordance with clear instructions from the tutor. Assessment could be a logbook describing what work has been carried out, supported by witness statements, photographic evidence, job cards or tutor observation records, as appropriate.

For 2.2, learners are required to clean and store tools correctly after use. Once learners have been instructed how to clean and store tools, a logbook describing what work has been carried out, supported by witness statements, photographic evidence, job cards or tutor observation records, would provide appropriate assessment evidence.

For 3.1, learners are required to maintain health and safety in accordance with relevant legislation and codes of practice. Learners will need to be informed of the relevant legislation and codes of practice and, more specifically, their responsibilities in relation to the identified legislation and codes of practice. Assessment could take the form of a logbook in which learners state what actions they have taken to comply with legislation and codes of practice, and tutor observation records confirming this.

For 3.2, learners are required to correctly identify and report any hazards. Naturally occurring evidence where hazards are present and require reporting will make appropriate assessment evidence, supported by a tutor observation record, will be appropriate evidence for this assessment criterion. Simulation may be needed to enable learners to identify and report hazards.

For 3.3, learners are required to dispose of waste safely in accordance with instructions. Observation records and logbooks that confirm that this has been carried out following instructions from tutors would be appropriate forms of assessment.

For 3.4, learners must carry out work in a manner which minimises environmental damage. Tutor observation records, coupled with logbooks recording how the maintenance work carried out minimises any environmental damage, would be appropriate. This could include evidence to show how the maintenance work extends the working life of the piece of equipment, therefore minimising the need for new equipment and disposal of old equipment.

Essential resources

Learners should have access to vocationally relevant settings, such as an animal unit, farm or horticultural enterprise, in which a variety of manual and mechanical equipment is used to give learners a varied experience of maintaining equipment. Centres should also provide sufficient equipment for learners to demonstrate competence over time, and opportunities to work with different pieces of equipment.

Employer engagement and vocational contexts

Learners should be able to develop transferable skills, in terms of maintenance skills, use of tools, safe working practices and compliance with codes of practice, that they can use in the workplace under supervision.

Indicative resource materials

Textbooks

Tutors should source suitable textbooks relevant to the sector learners are working in, and which relate to the types of equipment being maintained.

Websites

www.howstuffworks.com

www.hse.gov.uk

Unit 17: Assist with the Care of Animals

Unit code: A/502/4588

QCF Level: 1

Credit value: 2

Unit aim

The learner will be able to assist with the care of animals, including monitoring the health and condition of the animals and providing feed and water. All work will take place in a supervised context and must meet appropriate health and safety requirements.

Unit introduction

The purpose of this unit is to develop skills in caring for animals, in particular monitoring their health, feeding and providing them with water. This unit applies to both small animals and farm animals.

The unit has two learning outcomes which should be delivered integrally. The first learning outcome deals with developing observational skills to recognise animal health and, more importantly, ill health. A lot of practice is needed in order to become proficient in this area. The second learning outcome, while specifically dealing with feeding and providing water, provides further opportunities to reinforce and develop learners' observational skills.

It is a requirement that learners are aware of health, safety and welfare issues, and that they wear appropriate PPE at all times.

For the purposes of this unit, the term 'small animals' encompasses the range of small mammals, birds, fish, insects, reptiles and amphibians commonly kept as pets in the UK. If learners are working with small animals for this unit, they should work with a minimum of three contrasting species.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with monitoring and caring for the health and wellbeing of animals</p>	<p>1.1 Treat animals according to relevant legislation</p> <p>1.2 Minimise any likelihood of stress and injury to the animals</p> <p>1.3 Optimise the health and wellbeing of animals during their work</p> <p>1.4 Provide animals with the necessary opportunity to display natural behaviour, eg appearance, posture and movement, behaviour, bodily functions, social interaction</p> <p>1.5 Monitor and report physical condition, behaviour and the general health and wellbeing of animals clearly and accurately to others</p> <p>1.6 Monitor and report on the animal's environment</p> <p>1.7 Maintain health and safety, and the welfare of animals, during work</p>
<p>2 Be able to assist with providing food and water for animals</p>	<p>2.1 Feed animals in accordance with instructions</p> <p>2.2 Supply water to the animals from the correct sources, in the correct quantities and using the system in accordance with instructions</p> <p>2.3 Monitor and report on the animal's feeding and drinking habits</p> <p>2.4 Clean and maintain equipment ready for use and store it safely and securely in an appropriate place</p> <p>2.5 Dispose of any waste from feeding in the correct manner and place</p> <p>2.6 Maintain health and safety, and the welfare of animals, during work</p>

Unit content

1 Be able to assist with monitoring and caring for the health and wellbeing of animals

Health: signs of health eg eyes, nose, ears, teeth, coat, excretion; signs of ill health eg cloudy/runny eyes, irregular breathing, scabs, rough coat, isolated, not eating, thin, limping; factors affecting animal welfare eg stress, handling; relevant legislation

Wellbeing: environment eg accommodation, bedding, ventilation, lighting, humidity; features of natural behaviour eg feeding patterns and methods, sleeping patterns

2 Be able to assist with providing food and water for animals

Food: eg concentrates, hay, silage, haylage, milk, milk powder for farm animals; eg fresh, frozen, dry, moist, tinned food for small animals; feeding habits of animals eg ruminating, grazing, feed space per animal; feed waste disposal eg uneaten haylage, pellets, moist food, live food

Water: eg trough, bucket, bottle, bowl, drinkers eg automatic, self-filling; correct height of water relative to size of animal; drinking habits of animals

Health and safety: safe working practices in accordance with risk assessments relevant to the workplace

Essential guidance for tutors

Delivery

Learning outcome 1

Learners should be given ample opportunity to recognise signs of health and ill health in a range of animals, and to learn about their natural behaviour and factors that may affect their wellbeing. If working with farm animals, young stock such as calves, lambs or piglets lend themselves to this very well, as there is almost always both healthy and not so healthy stock available at any one time. If working with small animals, animals that are kept in small groups, such as rabbits, guinea pigs or small rodents, are suitable animals to monitor in order to recognise the signs of poor and good health. The health of selected project animals could be monitored and recorded over time by learners, noting any changes over a given time period.

Learning outcome 2

Learners should, ideally, be given a range of animals to feed and provide with water. As in learning outcome 1, if working with farm animals, calves, lambs or piglets lend themselves well to this. At the same time as feeding and watering animals, the skills developed in recognising signs of health and general behaviour patterns can be practised at the same time. Learners working with small animals will need to work with a range of animals that have different feeding and watering requirements and equipment, covering a minimum of three species within the range indicated in the *Unit abstract*.

Learners need to experience different methods of water provision, in order to appreciate the wide range of equipment associated with supplying water to animals, how to keep the water supply clean and how to clean the receptacle used to provide water. Learners must also understand the need to check that animals can reach the water supply.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Identify and interpret signs of health and ill health; regular checking of animals; inspect animal environment eg stocking density, bedding, ventilation, movement, feeding patterns, sleeping patterns.
Feed animals, eg mix milk powder for lambs or calves, feed nuts or pellets to cattle, sheep or calves, feed mix or pellets to rabbits or guinea pigs, feed meat or dry diet to dogs or cats; provide forage/fibre, eg hay or straw in racks or other appropriate container; clean any feed equipment, eg buckets used for milk, bowls used for feed, water; dispose of feed waste.
Health and safety, eg wear PPE for relevant tasks.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, 1.2, 1.3, 1.4, 1.5, 1.6 and 1.7, learners must be able to recognise signs of health and ill health and to monitor and report on the condition and environment of at least two farm animals, or three small animals, of different types. Learners must be able to show that they are able to provide the animals with an environment conducive to their natural behaviour and wellbeing.

To achieve 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6, learners need to show that they can feed animals in accordance with instructions. With farm animals, this could involve feeding ewes in a field or pen with the required weight of feed in a bag. Learners must also be able to judge when a water trough needs to be cleaned and where any maintenance needs to be carried out. Similarly, when working with small animals, learners should have the opportunity to demonstrate that they can feed animals in accordance with instructions, provide water in an appropriate container and clean and store utensils cleanly and safely. Learners must also monitor and report on the feeding and drinking habits of animals, whether they are working with farm or small livestock.

Essential resources

Learners need access to a range of different animals and their accommodation, and to equipment for feeding and providing water.

Employer engagement and vocational contexts

Visits to commercial farms, open farms and wild animal parks will help learners to develop an understanding of the vocational context and future employment possibilities.

Indicative resource materials

Textbooks

Alderton D – *The Illustrated Practical Guide to Small Pets and Pet Care* (Southwater, 2008)
ISBN 9781844765959

Cardell K – *Practical Sheep Keeping* (The Crowood Press, 1998) ISBN 9781861261632

Elwood M and Ruelokke M – *Guinea Piglopaedia* (Ringpress Books Ltd, 2003)
ISBN 9781860542510

Evans J and White K – *Catlopaedia* (Ringpress Books Ltd, 2006) ISBN 9781860540189

Evans J and White K – *Doglopaedia* (Ringpress Books Ltd, 1998) ISBN 9781860540745

Grindol D – *The Canary: An Owner's Guide to a Happy Healthy Pet* (John Wiley & Son, 2000)
ISBN 9781582450186

Harper D – *Caring for Your Pet Hamsters and Gerbils* (Interpet Publishing, 1999)
ISBN 9781902389813

Hulsen J – *Cow Signals* (Roodbont, Netherlands, 2007) ISBN 9789075280654

Hulsen J – *From Calf to Heifer* (Roodbont, Netherlands, 2006) ISBN 9789075280951

Logsdail C, Logsdail P and Hovers K – *Hamsterlopaedia* (Ringpress Books Ltd, 2003)
ISBN 9781860542466

Manning D – *Exotic Pets* (Collins, 2008) ISBN 9780007262755

Martin H – *Zebra Finches* (Barron's Educational Series, 2000) ISBN 9780764110405

Meadows G and Flint E – *The Dog Owner's Handbook* (Caxton, 2002) ISBN 9781840673302

Mills D – *Aquarium Fish* (Dorling Kindersley, 2000) ISBN 9780751327267

RSPCA – *Care for your Budgerigar* (Collins, 2005) ISBN 9780007193585

RSPCA – *Care for your Guinea Pig* (Collins, 2004) ISBN 9780007182695

RSPCA – *Care for your Hamster* (Collins, 2005) ISBN 9780007193578

RSPCA – *Care for your Rabbit* (Collins, 2004) ISBN 9780007182708

Taylor D – *The Ultimate Cat Book* (Dorling Kindersley, 1994) ISBN 9780863183713

Journals

Country Smallholding

Farmers Weekly

The Smallholder

Your Dog magazine

Websites

www.bluecross.org.uk

The Blue Cross

www.defra.gov.uk

Department for Environment, Food and Rural Affairs

www.dogstrust.org.uk

The Dogs Trust

www.fwi.co.uk

Farmers Weekly

www.petcare.org.uk

The Pet Care Trust

www.rspca.org.uk

The Royal Society for the Prevention of Cruelty to Animals

www.thebrc.org

The British Rabbit Council

www.the-kennel-club.org.uk

The Kennel Club

Unit 18: Assist with the Movement of Animals

Unit code: D/502/4101

QCF Level: 1

Credit value: 2

Unit aim

The learner will be able to assist with the movement of animals, between different locations, and including loading and unloading the animals from transport vehicles. All work will take place in a supervised context and must meet appropriate health and safety requirements.

Unit introduction

The purpose of this unit is for learners to develop and practise skills that they will require whenever farm animals are moved. This will include skills in observing and, later, in predicting likely animal behaviour, especially where animals are moved into handling areas or confined spaces.

Tasks offered should ideally be carried out with animals that are fairly used to being moved, such as dairy cows, calves and sheep. It is envisaged that learners should experience moving a range of animals in a variety of ways. Learners should begin with animals that are relatively easy to move, such as dairy cows coming into the parlour from the fields, before they experience moving sheep and lambs.

The unit has two learning outcomes. Learning outcome 1 involves moving animals from one place to another, for example from a field to a handling area. Learning outcome 2 involves loading animals onto a vehicle, such as lambs being taken to an abattoir, or ewes and lambs being moved from the lambing shed to the grazing field.

It is a requirement that risk assessments are undertaken before work commences and that learners wear appropriate PPE at all times.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with moving animals from one place to another</p>	<p>1.1 Communicate effectively with their colleagues</p> <p>1.2 Approach the animals quietly, calmly and confidently</p> <p>1.3 Handle and restrain animals safely</p> <p>1.4 Move animals to the correct place and re-establish them as instructed</p> <p>1.5 Maintain the health and safety of themselves and others at all times</p> <p>1.6 Maintain the wellbeing of the animals at all times</p> <p>1.7 Report any problems to the appropriate person</p>
<p>2 Be able to assist with the loading and unloading of animals for transport</p>	<p>2.1 Prepare animals for transport as instructed</p> <p>2.2 Prepare the transport vehicle so that it is safe for animals to travel</p> <p>2.3 Load and unload the animals as instructed</p> <p>2.4 Establish the animals in the new area as instructed</p> <p>2.5 Maintain the health and safety of themselves and others at all times</p> <p>2.6 Maintain the wellbeing of the animals at all times</p> <p>2.7 Communicate effectively with their colleagues</p> <p>2.8 Report any problems to the appropriate person</p>

Unit content

1 Be able to assist with moving animals from one place to another

Moving animals: methods of moving a herd or flock eg from one field to another, from a field to a handling area; methods of lifting small animals eg lambs, piglets; count animals eg before, during or after moving where relevant; check animals are settled in new area

Safety: safety of animals and operators eg keep work area free of potential hazards that could cause injury to the group, the animals or others; risk assessment; ways of minimising risks; PPE and hygiene precautions; current, relevant legislation and codes of practice relevant to movement of specified animals

2 Be able to assist with the loading and unloading of animals for transport

Loading and unloading: prepare vehicle and ramp eg check hazards, apply litter to ramp, erect hurdles to prevent escape; count animals onto vehicle; count animals off vehicle; check animals are settled in new area

Safety: safety of animals and operators eg keep work area free of potential hazards that could cause injury to the group, the animals or others; risk assessment; ways of minimising risks; PPE and hygiene precautions; current, relevant legislation and codes of practice relevant to movement of specified animals

Essential guidance for tutors

Delivery

Tutors must be guided by the type of learner in order to match them to the farm animals being used. Health, safety and welfare considerations will need to be planned and carried out carefully.

A suitable environment would be a lambing shed or a dairy where calves and young stock are available.

Tutors must enforce the wearing of appropriate PPE.

Learning outcome 1

Useful practice for learners is moving sheep from a field to a handling area, for example for foot-bathing. In the appropriate season, ewes and lambs need moving for treatments to be administered. This may provide opportunities to incorporate outcomes from other units, such as those relating to care of animals or farm animal health.

Learners should have the chance to observe and react to animals' behaviour, for example dealing with situations where gates should be opened wide to avoid animals crushing each other and pushing through a confined space. Moving sheep into and through a race for foot-bathing or drafting ewes and lambs offer ideal opportunities for this.

Learning outcome 2

Learners need to recognise livestock trailers, their attachment to vehicles if relevant, and any necessary safety hitches or taillights. Learners also need to appreciate the necessity for stock-proofing the area surrounding the loading ramp in order that no animals can escape when loading.

Learners should practise counting stock both onto and off a trailer, if at all possible.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Recognise and approach stock for moving; awareness of animal behaviour, eg if females have young stock with them; move animals at a sensible pace; avoid stress; keep animals together.
Preparation of vehicle to receive animals, eg a division to separate ewes and lambs in a vehicle; check area around vehicle is stock-proof and hazard free; estimate number of animals that can be contained in the vehicle; count animals onto the vehicle; count them off and check none have been injured in transit.
Health and safety, eg wear PPE, risk assessment before carrying out a task.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, 1.2, 1.3, 1.4, 1.5, 1.6 and 1.7, learners must be able to show that they can move a group of animals safely, either as part of a small team or on their own. They must also demonstrate the ability to react to changeable animal behaviour.

To achieve 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7 and 2.8, learners must be able to assist in preparing a vehicle before loading farm animals. They should be aware of the approximate number of animals that can be penned inside the vehicle. For assessment of the loading of farm animals, learners must show that the animals cannot escape from around the loading area, that the ramp is secure, and that the animals are counted onto and off the vehicle.

Essential resources

As a minimum, access to sheep, cows, calves or pigs is essential. This could be provided at a suitable farm, farm park or even a livestock market.

It is envisaged, however, that a commercial farm situation (either at a college or private farm enterprise) will be used, in order to simulate real-life conditions and confer a degree of safety to learners.

Employer engagement and vocational contexts

Visits to commercial farms and livestock markets will help learners to develop an understanding of the vocational context and future employment possibilities.

Indicative resource materials

Textbooks

Cardell K – *Practical Sheep Keeping* (The Crowood Press, 1998) ISBN 9781861261632

Case A – *Starting with Pigs* (Broad Leys Publishing, 2001) ISBN 9780906137291

Hulsen J – *From Calf to Heifer* (Roodbont, Netherlands, 2006) ISBN 9789075280951

Hulsen J – *Cow Signals* (Roodbont, Netherlands, 2007) ISBN 9789075280654

Journals

Country Smallholding

Farmers Weekly

The Smallholder

Websites

www.countrysmallholding.com

www.fwi.co.uk

www.smallholder.co.uk

Unit 19: Assist with Preparing and Maintaining Livestock Accommodation

Unit code:	J/502/4108
QCF Level:	1
Credit value:	2

Unit aim

The learner will be able to assist with preparing livestock accommodation, including any required cleaning to appropriate hygiene levels, providing bedding or other necessary requirements and at all times meeting the requirements of healthy and safe working. All work will take place in a supervised context.

Unit introduction

The purpose of this unit is to give learners the opportunity to experience farm situations where animals are housed and need to be provided with clean bedding and water on a regular basis.

Delivering this unit alongside others that relate to the care and feeding of farm animals will allow learners to develop, and build on, transferable skills and should lead to greater learner confidence. Tasks associated with providing bedding offer excellent opportunities to observe animal health and behaviour in the context of accommodation.

It is a requirement that risk assessments are undertaken before work commences and that learners wear appropriate PPE at all times.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with the preparation of livestock accommodation, under supervision	1.1 Prepare the necessary equipment and materials and maintain them ready for use 1.2 Carry out cleaning routines in accordance with instructions 1.3 Replace any ancillary materials and fittings when cleaning is complete in accordance with instructions 1.4 Prepare accommodation so that it is safe, healthy and secure for livestock in accordance with instructions 1.5 Ensure an adequate supply of clean, uncontaminated water is available
2 Be able to maintain livestock accommodation, under supervision	2.1 Maintain accommodation in a healthy, safe and clean condition for livestock in accordance with instructions 2.2 Adjust and replenish materials and supplies required by livestock as instructed 2.3 Monitor the health and wellbeing of livestock throughout operations 2.4 Report any changes in the behaviour or condition of livestock to the appropriate person 2.5 Clean and maintain equipment in a fit state for use and store safely and securely in an appropriate storage area
3 Be able to work safely	3.1 Dispose of waste in a safe manner and place in accordance with instruction 3.2 Identify hazards correctly and report them to the appropriate person 3.3 Maintain the health and safety of yourself and others throughout the process

Unit content

1 Be able to assist with the preparation of livestock accommodation, under supervision

Equipment: eg PPE, fork

Prepare accommodation: relevant bedding material eg wheat straw, barley straw; methods of spreading straw eg by hand or with fork; check water trough eg clean out, overflows, ball-valve is protected; check other feed troughs; check that area is stock-proof

Health and safety: issues eg dust masks, use of fork, animal behaviour

2 Be able to maintain livestock accommodation, under supervision

Monitor livestock: check stock eg count, signs of health; stocking density eg size of stock and area of pen

Maintain accommodation: ventilation eg condensation, wind direction; bedding eg dry or wet, when to replace, removal of string or plastic

Equipment: correct cleaning and storage

3 Be able to work safely

Waste disposal: correct disposal method for organic waste; correct disposal method for inorganic waste

Safety: keep work area free of potential hazards that could cause injuries to the group, the animals or others; risk assessment; ways of minimising risks; PPE and hygiene precautions; current, relevant legislation

Essential guidance for tutors

Delivery

A farm or access to a farm is essential as this unit is designed to be practical. Learner experience and assessments can be either in team situations or individually.

Correct PPE must be worn at all times and any relevant health and safety procedures planned and implemented.

Learning outcome 1

Learners should, where possible, have access to a range of farm animals for which to prepare accommodation. Calves and a lambing shed are particularly suited to this purpose, rather than older cattle where safety is a greater concern. A lambing shed offers scope for both individual and team work for assessment purposes. Learners need to be shown the importance of dry bedding for livestock in order to ensure optimum health and hygiene conditions, especially where females give birth. The importance for livestock of having access to fresh, clean water must also be emphasised. The animals' ability to reach the water must also be considered, which can be overlooked on occasions.

Learning outcome 2

Having gained experience in learning outcome 1, learners need to be able to determine when clean bedding should be provided. They also need to understand the importance of checking the health of livestock at the same time as providing fresh bedding.

Learning outcome 3

Learners need to understand the importance of removing any waste material such as baler twine or plastic wrap in the bedding and the reasons for this, ie its inability to be broken down in a muck heap. Where possible, learners should be shown how baler twine can get wrapped around the beaters of a muck spreader and the damage that this causes.

Good practice should be shown in terms of the correct means of waste disposal and how this links in to the farm's overall policy of sustainability.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Differentiate bedding materials, eg wheat and barley straw; assess when bedding needs to be replaced; spread bedding material; use any equipment correctly and safely, eg muck fork.
Assess area of pen in relation to number of animals.
Prepare water trough, eg clean out, refill, check ball-valve is covered, check for frost protection.
Check bedding and recognise when fresh bedding needs to be applied; check if there is any string or other inorganic material in the bedding.

Topic and suggested assignments/activities
Dispose of any organic waste eg waste straw to muck heap or storage area; dispose of inorganic material, eg baler twine, plastic sheeting, plastic wrapping.
Health and safety, eg wear PPE for relevant tasks, risk assessment before carrying out a task.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, 1.2, 1.3, 1.4 and 1.5, learners need to be able to measure a pen area and relate it to the number of animals that will occupy the housing. They must be able to select the appropriate type of bedding, and spread it correctly. Any equipment used must be stored appropriately after use. Learners must also be able to clean out a water trough and prepare it for use.

To achieve 2.1, 2.2, 2.3, 2.4 and 2.5, learners must be able to recognise when fresh bedding needs to be provided, and how much. Where livestock have been in the same accommodation for a long time, learners should be able to assess whether the livestock have outgrown the size of their pen. Learners must be able to check on the condition of the animals and report any changes to the appropriate person.

To achieve 3.1, 3.2 and 3.3, learners must be able to recognise and dispose of any waste material, organic and inorganic. They should also be able to carry out a simple risk assessment before entering a pen of housed animals.

Essential resources

Learners need access to farm livestock accommodation, such as a college farm, other commercial farm or farm park.

Employer engagement and vocational contexts

Visits to commercial farms and livestock markets will help learners to develop an understanding of the vocational context and future employment possibilities.

Indicative resource materials

Textbooks

Cardell K – *Practical Sheep Keeping* (The Crowood Press, 1998) ISBN 9781861261632

Hulsen J – *Cow Signals* (Roodbont, Netherlands, 2007) ISBN 9789075280654

Hulsen J – *From Calf to Heifer* (Roodbont, Netherlands, 2006) ISBN 9789075280951

Journals

Country Smallholding

Farmers Weekly

Websites

www.countrysmallholding.com

www.defra.gov.uk

www.fwi.co.uk

Unit 20: Assist with Preparation and the Monitoring of Livestock Outdoors

Unit code:	Y/502/4601
QCF Level:	1
Credit value:	2

Unit aim

The learner will be able to assist with preparing outdoor sites to receive livestock, including providing water and checking the condition of feed if necessary. Monitoring of the condition of boundaries is also required. All work will take place in a supervised context and must meet appropriate health and safety requirements.

Unit introduction

The purpose of this unit is to allow learners to experience farm situations where animals are kept on outdoor sites and need to be provided with water and feed on a regular basis. Undertaking these tasks will enable learners to develop the essential skills that a stockperson needs in order to understand farm animals and their behaviour.

Ideally, learners should have the opportunity to develop their skills with dairy cows and sheep with lambs at grass, as these animals are relatively docile and safe.

Learners should be encouraged to spend time simply observing these animals outside, grazing, moving and behaving naturally, in order to deepen their appreciation of animal behaviour. All of these observational skills can be practised whilst learners are checking field boundaries, water troughs, gateways and any other field components.

Delivering this unit alongside other units that relate to areas such as movement, feeding and health of farm animals will allow learners to develop and reinforce transferable skills and should lead to greater confidence.

It is a requirement that risk assessments are undertaken before work commences and that learners wear appropriate PPE at all times.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with the preparation of outdoor sites for livestock</p>	<p>1.1 Ensure the quantity and suitability of feed and water are appropriate for livestock requirements in accordance with instructions</p> <p>1.2 Confirm boundaries as being safe and secure</p> <p>1.3 Take the appropriate action where there are problems with the boundaries</p> <p>1.4 Report to the appropriate person potential hazards to livestock</p>
<p>2 Be able to assist with the introduction, monitoring and maintenance of livestock on outdoor sites</p>	<p>2.1 Assist with introduction of livestock to the outdoor site safely and correctly in accordance with instructions</p> <p>2.2 Monitor the condition and number of the livestock in accordance with instructions, and report any changes to the appropriate person</p> <p>2.3 Monitor the site and its boundaries to confirm their continuing suitability</p> <p>2.4 Adjust the quality and quantity of feed and water in accordance with instructions</p> <p>2.5 Accurately identify any problems with the site and report them to the appropriate person</p>
<p>3 Be able to work safely</p>	<p>3.1 Maintain the health and safety of self and others throughout operations</p>

Unit content

1 **Be able to assist with the preparation of outdoor sites for livestock**

Preparation: check boundaries eg fences, hedges, ditches; gateways; water troughs eg cleanliness, working order, ball-valve protected; obstacles eg safety for stock, loose or protruding wire from fences; feeding equipment eg where to position, working order; size of field eg number of animals, stocking rate, appropriate quantities of feed and water

2 **Be able to assist with the introduction, monitoring and maintenance of livestock on outdoor sites**

Introduction: stock settled into new field eg no signs of stress

Monitoring: observe behaviour eg grazing, feeding; count stock (where relevant); signs of restlessness eg where stock are short of feed; water provision eg cleanliness, height of trough, ball-valve working and protected

3 **Be able to work safely**

Safety: keep work area free of potential hazards that could cause injury to the group, the animals or others; risk assessment; ways of minimising risks; PPE and hygiene precautions; current, relevant legislation

Essential guidance for tutors

Delivery

The ideal seasons for delivery and assessment are spring and summer. Freshly lambled ewes and their lambs are ideal, both for preparing the field and also to monitor animal behaviour. Similarly, dairy cows at grass offer ample opportunities, without risk, of monitoring stock outside.

Learning outcome 1

Learners must have the chance to assess field size and relate this to the number of animals likely to be present. This will develop skills in understanding stocking rates. A cow per acre is a useful guide and mnemonic!

Learners must also be aware of the importance of the provision of clean water and should develop skills in basic plumbing maintenance, such as how ball-valves work and how they should be protected. Similarly, the maintenance of feeding equipment such as ring feeders, feed troughs or hay racks, where they are positioned and if they need to be moved daily to avoid grass contamination, are all basic livestock skills that should be practised.

Learning outcome 2

Learners should be given ample opportunity to observe livestock behaviour when grazing, drinking and resting. This will also, indirectly, provide a good opportunity for monitoring livestock health which appears in other units. Not only is this good reinforcement, but also excellent experience in developing the all-important 'stockperson's eye', an experiential learning skill.

Learning outcome 3

Correct health and safety procedures and use of PPE must be observed throughout all activities.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Check size of field relative to numbers of stock that will occupy it; walk the complete field boundary and check it is stock-proof; check where animals might escape or hurt themselves.
Check water provision for correct working, ability of animals to reach water, water cleanliness.
Assess amount of grazing on offer; assess suitability of feeding equipment eg ring feeders, hay racks, feed troughs.
Observe and monitor stock behaviour in the field eg ewes and lambs, grazing behaviour; distance moved over a given period; mis-mothering and when it could happen eg when feeding concentrates; observe cattle and sheep grazing habits.
Health and safety eg wear PPE for relevant tasks, risk assessment before carrying out a task.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks specifically designed with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, 1.2, 1.3 and 1.4, learners must show that they can prepare a field to receive farm animals with regard to the following: field gates in working order, water is clean, trough is working and not leaking, all boundaries are stock-proof (hedges, fences, ditches), and any feed equipment is hazard-free. Learners should have some idea of estimating field sizes and matching field size to stock numbers.

To achieve 2.1, 2.2, 2.3, 2.4 and 2.5, learners need to be able to count stock (where practical) or at least estimate stock numbers (for example a small flock of sheep), settle the animals into the new field and show they can interpret correct feeding or grazing behaviour and general stock welfare. They should, in addition, be able to assess the quantity of forage or similar that is available and how long it is likely to last.

To achieve 3.1, learners must use the correct PPE and work safely throughout.

Essential resources

Learners need access to fields that are to receive grazing livestock. The ideal animals are dairy cows and ewes with lambs. These are safe to walk amongst without disturbance and are the livestock that learners are most likely to encounter.

They should also be able to observe these same livestock grazing.

Employer engagement and vocational contexts

Visits to commercial farms and livestock markets will help learners to develop an understanding of the vocational context and future employment possibilities.

Indicative resource materials

Textbooks

Cardell K – *Practical Sheep Keeping* (The Crowood Press, 1998) ISBN 9781861261632

Hulsen J – *Cow Signals* (Roodbont, Netherlands, 2007) ISBN 9789075280654

Hulsen J – *From Calf to Heifer* (Roodbont, Netherlands, 2006) ISBN 9789075280951

Journals

Country Smallholding

Farmers Weekly

The Smallholder

Websites

www.countrysmallholding.com

www.fwi.co.uk

www.smallholder.co.uk

Unit 21: Farm Animal Health

Unit code: L/502/4546

QCF Level: 1

Credit value: 4

Unit aim

The learner will develop skills that are required on a daily basis on livestock farms through a range of tasks associated with observation, safe handling, moving and treatment of farm animals as well as basic recording for legislative and management purposes. In this unit, use of the term ‘farm animals’ relates to cattle or sheep or pigs.

Unit introduction

The purpose of the unit is to practise and develop skills needed on any livestock enterprise where cattle, sheep or pigs are kept, whether a smallholding or larger commercial farm.

The tasks that learners will undertake cover the daily checking of livestock, any specific treatment necessary and the associated handling and moving of animals. Basic reading and writing skills will be incorporated into these tasks in the form of interpreting information for animal identification (ID) and Veterinary Medicine (Vet Med) labels before their administration, and subsequent simple recording of this information on farm record sheets.

It is envisaged that learners should experience carrying out the range of tasks with a variety of different animals, especially calves, sheep and pigs. Sheep and calves are relatively easy to handle, and learners should gain confidence from working with these animals in order to be able to work with larger ones such as dairy and beef cattle. Working with rams is not recommended.

It is a requirement that risk assessments are undertaken before work commences and that learners wear appropriate PPE at all times.

The suggested tasks for the unit outcomes can be carried out quite easily for assessment purposes and on a number of occasions, so that a useful learner profile can be built up. The tasks are not exhaustive, but reflect real-life situations on livestock farms. The tasks will develop learner skills in animal observation, handling, restraint and recording as well as health and safety awareness.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know different farm animal breeds and gender types	1.1 Recognise different farm animal breeds and gender types
2 Know signs of good health and ill health in farm animals	2.1 Recognise signs of good health in different farm animals 2.2 Recognise signs of ill health in different farm animals
3 Know different farm animal identification	3.1 Recognise different farm animal identification 3.2 Carry out basic recording of farm animal information for farm management purposes
4 Be able to move farm animals safely	4.1 Move farm animals from one place to another on foot or onto a vehicle
5 Be able to assist in treating farm animals with appropriate veterinary medicines	5.1 Handle and restrain farm animals for inspection and treatment 5.2 Assist in treating farm animals with veterinary medicines
6 Be able to work safely with farm animals	6.1 Maintain a safe and tidy working environment 6.2 Identify hazards while working with farm animals 6.3 Identify risks while working with farm animals 6.4 State how to minimise risks while working with farm animals

Unit content

1 Know different farm animal breeds and gender types

Gender types and breeds of farm animals: cattle eg calves, heifers, cows, bulls, steers; sheep eg ewes, rams, lambs; pigs eg sows, boars, gilts; dairy breeds eg Holstein x Friesian, Jersey; beef breeds eg dairy cross beef, UK and continental, sucklers; sheep breeds; pig breeds eg Large White, Landrace, Duroc

2 Know signs of good health and ill health in farm animals

Signs of good health: relevant to particular farm animals eg calves, sheep, cows, pigs; head eg eyes, nose, ears, teeth; body eg coat, fleece, feet; excretion relating to diet eg dung, urine; eating eg grazing, ruminating

Signs of ill health: relevant to particular farm animals eg calves, sheep, cows, pigs; cloudy/runny eyes, irregular breathing, scabs, rough coat, open/coarse wool, cast, isolated, not eating, thin, limping

3 Know different farm animal identification

Farm animal ID: eg ear tags, tattoos, freeze brands, notches, temporary colour markings

Welfare: codes of practice for a relevant farm animal eg Duty of Care (Five Needs), moving and isolating, quarantine

Records: relevant current legislation for movement eg passports, transport off farm, movement book; relevant current legislation for recording Veterinary Medicines (Vet Meds) eg withdrawal period, dosage, relevant drug, batch number

4 Be able to move farm animals safely

Moving animals: methods of moving from one place to another safely; counting eg cattle in a field or pen, sheep loaded onto lorry; stress of animals when moving eg loading onto a vehicle, pushing through a narrow gateway, moving for weighing purposes; health and safety of operator and animals

5 Be able to assist in treating farm animals with appropriate veterinary medicines

Handling and restraint: crates or crushes; halter eg for showing or for temporary purposes, quick release hitch; turning an animal over by hand eg carrying for a short distance, holding a lamb or piglet, foot trimming

Treatment: prepare a footbath, mix chemicals; prepare injection from a bottle eg shake bottle, needle, syringe; health and safety of operator and animals; calibrate equipment eg worm drench gun; interpret basic label instructions, clean equipment

6 Be able to work safely with farm animals

Safety: keep work area free of potential hazards that could cause injuries to the group, the animal or others; risk assessment; ways of minimising risks; PPE and hygiene precautions; current, relevant legislation

Essential guidance for tutors

Delivery

A farm or access to a farm is essential. It is possible to interlink all of the learning outcomes into one activity for assessment purposes at a later stage, such as foot-bathing ewes. This will involve moving them, checking their ID, possibly weighing a sample to record, and appropriate health and safety including risk assessments, breed and gender recognition.

All assessments are designed to be practical and can take the form of individual assessments or witness statements. Where a range of breeds is difficult to experience, then pictures can be used.

The unit is designed to give learners the maximum hands-on experience, both working in a team and individually, with built-in reading and writing skills such as interpreting labels and recording farm management information.

Correct PPE will be necessary at all times.

Learning outcome 1

Breed and gender type recognition could be carried out during an induction or initial tour of farm enterprises, followed up by specific practicals linked to learning outcome 2, such as checking stock in a field or when housed for signs of health and ill health.

Learners will also have the chance to be assessed for this learning outcome during other practicals, for example foot bathing ewes, or weighing calves. A visit to a local livestock market is also a good way of experiencing different livestock breeds and gender types.

Learning outcome 2

Learners should practise recognising signs of good and ill health in more than one species of farm animal where possible (for example cows and sheep or calves and sheep). This might have to be ongoing to follow the seasons, such as observing stock at grass, lambing and housing. In a dairy herd there are usually cows with mastitis and lameness.

Constant practice helps learners to develop good observation skills (a 'stockperson's eye').

Learning outcome 3

Learners should see at least three different types of animal identification (ID). A local livestock market is a good place to see plastic tags, metal tags, freeze brands, tattoos, colour markings, raddle marks and possibly ear notches. Lambs in a lambing shed will have colour marks, as well as various ear tags.

During appropriate tasks (for example weighing, lambing, assisting with treatments) learners should be given individual record sheets to carry out their own recording of Vet Med data, lambing records, movement off farm, weighing etc. Tutors should emphasise the importance of accurate and legible information. These records can form part of learner evidence in a portfolio.

Learning outcome 4

Learners should be given different animals to move wherever possible, such as fetching cows from a field for milking, bringing sheep into a handling area for foot-bathing or other treatment, loading lambs onto a lorry to go to an abattoir, or simply moving stock from one field to another. A lambing shed offers numerous chances to practise and be assessed moving animals.

Learning outcome 5

Learners need to gain confidence in being amongst and handling farm animals. There are a variety of skills that can be practised, such as weighing livestock and assisting with any of the following: drenching, applying pour-ons, clipping cattle on their backs at housing, injecting, milking, foot bathing, foot trimming, disbudding, stomach tubing, tail docking and castration.

Tutors will need to judge the experience of learners before they carry out some of these activities.

Learning outcome 6

Learners should be given the opportunity to undertake risk assessments each time they carry out an animal practical. One of these should be written down to form part of an assessment. It will need to detail hazards, risks and how to minimise risks in order to cover all the assessment criteria.

Assessment could be standalone or integrated with one of the learning outcomes that lends itself to a formal risk assessment.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Tour of farm livestock enterprises; name the various breeds of farm animals.</p> <p>Observe signs of health and ill health in the relevant farm animals, eg checking stock in a pen or in a field, observing rams during tupping, observing cows bulling.</p> <p>Assessment of signs of health can be carried out in a practical situation; assess breeds either in a real situation or through pictures.</p>
<p>Identify different farm animal ID when touring the enterprises or working with the animals, eg dairy cow freeze brands and ear tags.</p> <p>Assessment can be carried out while on different livestock enterprises; also when moving sheep, eg from one field to another, to a handling area for foot bathing, loading ewes and lambs onto a vehicle after lambing, to an abattoir, counting through a race/onto lorry.</p>
<p>Moving animals by hand, eg unweaned calves; moving sheep and cattle from one field to another; drafting sheep through a race during foot-bathing; bringing cows into a collecting yard for milking.</p> <p>Assessment can be carried out in situ while moving animals, or associated with other learning outcomes both individually and for learning outcome 6 working as a team.</p>
<p>Basic calf tasks, eg haltering, taking temperature, injection, eg assisting in intra-nasal, weighing, disbudding; sheep tasks eg assisting in bottle feeding, stomach tubing, tail-docking, weighing lambs, foot bathing, injection, drenching or a pour-on; pig tasks, eg assisting with clipping teeth, stomach tubing, injecting iron, weighing.</p> <p>Assessment can be carried out during any of the above tasks.</p>

Topic and suggested assignments/activities
Records eg incorporate during tasks for other learning outcomes, legislative, eg Vet Med record after specific treatments, movement records after loading onto lorry; management records, eg weighing livestock.
Health and safety, eg wear PPE for relevant tasks, risk assessment before carrying out a task; interpreting information from Vet Meds, eg label icons, product information, dosage, withdrawal period.
Assessment could be carried out during any of the above tasks either at the start, during or at the end of a class.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, learners need to name at least two breeds from the following: dairy cows, beef animals, breeding ewes, rams, and pigs where available. In addition, learners must be able to recognise at least two of the following gender types: a dairy cow, a beef cow, a steer, a heifer, a calf, a ewe, a ram, a lamb, and where available, a sow and a boar.

To achieve 2.1, learners need to state (orally or written) at least two signs of good health for any specified farm animal.

To achieve 2.2, learners need to state (orally or written) at least two signs of ill health for any specified farm animal. These could be from more than one species as signs of ill health may be less frequent.

To achieve 3.1, learners need to recognise at least two different types of identification (ID). One could be a plastic tag and another a freeze brand (not two different sorts of plastic tags). Temporary colour spray marks on sheep during lambing are acceptable.

To achieve 3.2, learners must be able to produce a simple record, on a form, that shows the relevant data, input correctly and legibly. These could be weighing results, Vet Med treatment or lambing records.

To achieve 4.1, learners must move one type of farm animal safely and without undue stress. It should be done either as a team or individually (for example carrying a lamb).

To achieve 5.1, learners must demonstrate competence in handling farm animals, and this should not simply be restricted to picking up baby lambs for bottle feeding, or similar. Learners need to show that they can, for instance, restrain calves or lambs/ewes, for example for worm drenching. Turning a ewe over should be left to the tutor's discretion, depending on the size of animal and learner; a turnover crate could be used. Turning a lamb over should not present any problems.

To achieve 5.2, learners need to demonstrate competence in assisting with administering a treatment to farm animals, such as mixing a foot bath solution for ewes, applying a pour-on solution to lambs, administering an intra-nasal injection to calves, calibrating a drench gun, filling up a syringe.

To achieve 6.1, learners must wear the appropriate PPE for all tasks.

To achieve 6.2, 6.3 and 6.4, learners need to carry out one written risk assessment that details identifying hazards and risks and minimising risks when working with farm animals.

Essential resources

Access to farm livestock, such as a college farm, other commercial farm or farm park.

Suitable handling facilities and veterinary equipment.

Fields for livestock.

Local livestock market.

Employer engagement and vocational contexts

Visits to commercial farms and livestock markets will help learners to develop an understanding of the vocational context and employment possibilities.

Indicative resource materials

Textbooks

Bazeley K and Hayton A – *Practical Cattle Farming* (The Crowood Press, 2007)

ISBN 9781861269751

Cardell K – *Practical Sheep Keeping* (The Crowood Press, 1998) ISBN 9781861261632

Fuller R – *Suckled Calf Production* (Chalcombe Publications, 1998) ISBN 9780948617409

Hulsen J – *Cow Signals* (Roodbont, Netherlands, 2007) ISBN 9789075280654

Smith P – *Practical Pig Keeping* (The Crowood Press, 2001) ISBN 9781861263889

Straiton E – *Sheep Ailments* (The Crowood Press, 2001) ISBN 9781861263971

Upton J and Soden D – *An Introduction to Keeping Sheep* (Farming Books and Videos Ltd, 2007) ISBN 9781904871224

Journals

British Sheep booklet (National Sheep Association publication)

Farmers Guardian

Farmers Weekly

Websites

www.fwi.co.uk

www.nationalsheep.org.uk

Unit 22: Assist with Feedstuffs for Small Animals

Unit code: H/600/0473

QCF Level: 1

Credit value: 2

Unit aim

The learner will be able to receive, store and prepare animal feedstuffs and comply with the health and safety requirement.

Unit introduction

Developing the knowledge, understanding and practical skills needed to assist with feedstuffs for small animals will be essential for learners hoping to find employment in the animal care industries. This unit will enable learners to develop the necessary skills and underpinning knowledge to be able to operate effectively at a support level in the workplace.

Practical ability, underpinning knowledge and awareness of health and safety when preparing feedstuffs for small animals will be developed.

For the purposes of this unit, the term 'small animals' encompasses the range of small mammals, birds, fish, insects, reptiles and amphibians commonly kept as pets in the UK. Learners will be expected to work with a minimum of three contrasting species in completing the unit.

The unit also provides opportunities to develop other skills such as working with others, improving own learning and performance, communication and using ICT.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with receiving and storing animal feed</p>	<p>1.1 Work in a healthy and safe way which complies with legislation</p> <p>1.2 Check report that the correct quantities and types of animal feed have been delivered and that they are in an acceptable condition</p> <p>1.3 Move, store and handle two types of animal feed safely, and in a way that protects it from damage and contamination and minimises wastage</p> <p>1.4 Store animal feed safely according to instructions, in the order in which it is to be used</p> <p>1.5 Check stored animal feed regularly for any signs of pest infestation and report this to the appropriate person straight away</p> <p>1.6 Check stock levels regularly and tell the appropriate person if stocks are low</p>
<p>2 Be able to assist with preparing feed for animals</p>	<p>2.1 Wash their hands effectively before and after handling animal feed</p> <p>2.2 Obtain the equipment and materials needed to prepare and serve animal feed</p> <p>2.3 Clean work surfaces, utensils and equipment effectively before and after use</p> <p>2.4 Identify the type and quantity of animal feed required for each animal from feeding plans</p> <p>2.5 Prepare the required amount of two types of animal feed according to instructions in a way that minimises wastage</p> <p>2.6 Use the appropriate utensils in a hygienic way according to instructions</p> <p>2.7 Work in a healthy and safe way that complies with legislation</p> <p>2.8 Dispose of any stale and unusable animal feed in a safe place and put equipment and utensils away safely</p>

Unit content

1 Be able to assist with receiving and storing animal feed

Health and safety: cleanliness, correct use of utensils and equipment, manual handling

Storage: feed bins and containers, fridge, freezer, sources of contamination, type and prevention of pests, signs of pest infestation

Stock control: stock control systems, expiry dates, shelf life, low stock levels, delivery notes

2 Be able to assist with preparing feed for animals

Hygiene: hand washing, cross contamination

Preparing feed: types of feed eg fresh, frozen, dry, moist, tinned; amounts eg specific to species and manufacturers' guidelines; equipment eg chopping boards, knives, bowls; utensils eg scoops, scales, tweezers

Disposal: appropriate methods of disposal relevant to feed type eg composting

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be through routine practical work in the centre's animal unit, where learners will play an integral part in caring for the animals in the unit. Where the centre is unable to provide a suitable range of small animals as required by the unit, it will be necessary to arrange for learners to visit other animal units or collections to carry out appropriate practical work.

Some formative research and demonstration work will be appropriate before learners carry out feed storage and preparation.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussions and demonstrations to develop learner knowledge of how different types of animal feed should be moved, stored and checked. The health and safety aspects of moving and storing feed could also be introduced to learners.
Research work and formative discussions and demonstrations to develop learner knowledge of how different types of animal feed should be prepared and presented to the appropriate species. The health and safety aspects of preparing and serving animal feed and disposal of waste could also be introduced to learners.
<p>Be able to assist with receiving and storing animal feed</p> <p>This outcome could be delivered through a short series of discussions and demonstrations showing learners the processes and procedures for receiving and storing animal feed. This could include common types of pest that can infest animal feed and what is done to prevent this occurring. Assessment is likely to be through tutor observation and the completion of observation records. Authenticated photographic evidence will form the bulk of the assessment evidence.</p>
<p>Be able to assist with preparing feed for animals</p> <p>This outcome could be delivered and assessed through a series of practicals in the animal unit, where learners are directly involved in feeding a range of animals using the full range of animal feedstuffs. Learners could be shown how to prepare different types of feed in accordance with a diet sheet or other appropriate source of information. Assessment is likely to be through tutor observation and the completion of observation records. Authenticated photographic evidence will form the bulk of the assessment evidence.</p>

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners are required to work in a healthy and safe way which complies with legislation. Learners will need a basic awareness of the legislation that applies to receiving and storing animal feed, for example manual handling regulations. Assessment for this criterion is likely to take the form of continuous assessment over the duration of the unit, with formative feedback being given throughout to enable learners to improve their performance.

For 1.2, learners are required to check and report that the correct quantities and types of animal feed have been delivered and that they are in an acceptable condition. Evidence for this criterion can come through either a real or a simulated delivery of animal feed, where learners will be required to check the contents of the delivery against the order and delivery note and check the condition of the items in the delivery. It would be expected that learners will have several opportunities to carry out this task to demonstrate competence over time. Assessment evidence is likely to take the form of copies of order forms and delivery notes annotated by learners and countersigned by the supervising assessor.

For 1.3, learners are required to move, store and handle two types of animal feed safely, and in a way that protects it from damage and contamination and minimises waste. This criterion is likely to be assessed together with 1.2, as the activities are a natural continuation of the task for 1.2. Assessment evidence is likely to take the form of an observation record and a record of answers to questions on how learners have minimised waste and protected the feed from damage and contamination.

For 1.4, learners are required to store animal feed safely according to instructions, in the order in which it is to be used. This criterion is likely to be assessed with 1.2, as the activities are a natural continuation of the task for 1.2. Assessment evidence is likely to take the form of observation records covering the range of animal feeds identified in the unit content, indicating the measures learners took to ensure that feed was stored in the order in which it is to be used. Instructions given to learners should be stated clearly on the observation record, and comments from tutors should indicate clearly how learner performance has met the instructions given.

For 1.5, learners must check stored animal feed regularly for any signs of pest infestation and report this to the appropriate person. This criterion is likely to be assessed through simulation, as the opportunities for infestation of animal feed in well run animal units are limited. Evidence is likely to take the form of a series of questions and answers where learners can demonstrate their knowledge of what to look for and to whom this should be reported.

For 2.1, learners are required to wash their hands effectively before and after handling animal feed. Evidence for this criterion should be in the form of observation records over time, indicating continued effective performance. This would probably form an integral part of assessments for 2.2, 2.3, 2.6 and 2.7.

For 2.2, learners are required to obtain the equipment and materials needed to prepare and serve animal feed. Authenticated photographic evidence and observation records are appropriate types of assessment evidence for this criterion. There are opportunities to assess this criterion with 2.1, 2.3, 2.4, 2.5, 2.6 and 2.7.

For 2.3, learners are required to clean work surfaces, utensils and equipment effectively before and after use. Observation records are likely to be used to assess this criterion. Assessment is likely to take place on several occasions in order to cover the range of utensils and equipment used in preparing feed for small animals.

For 2.4, learners are required to identify from feeding plans the type and quantity of animal feed for each animal. Assessment for this criterion will need to take place over time, covering the range of small animals covered by the unit. Learners will need access to feeding plans, presented in an appropriate format for Level 1.

For 2.5, learners must prepare the required amount of two types of animal feed according to instructions and in a way that minimises waste. Learners should be assessed using two different – and, ideally, contrasting – types of animal feed according to given instructions. Assessment evidence is likely to take the form of an observation record for each type of feed prepared, with a record of learners' responses to questions on how waste was minimised for the two different types of feed.

For 2.6, learners are required to use the appropriate utensils in a hygienic way according to instructions. This criterion is likely to be assessed with 2.3 and 2.5 using observation records, following training and practice sessions.

For 2.7, learners are required to work in a healthy and safe way that complies with legislation. Learners will need a brief working knowledge of relevant legislation, for example Health and Safety at Work Act 1974, but it should be stressed that this is about being able to assist with food preparation, so supervision would be expected. Suitable assessment evidence would be authenticated photographs showing learners at work, written submissions from learners indicating how they worked healthily and safely and tutor observation records.

For 2.8, learners are required to dispose of any stale and unusable animal feed appropriately and put equipment and utensils away safely. Centres delivering this unit are likely to have clearly established protocols for waste disposal that learners will be required to follow. These should be made clear to learners during a unit induction to enable them to follow these protocols during practical work. Assessment for this criterion is likely to be through observation at several points during the unit, following formative feedback. Suitable forms of evidence will be tutor observation records and authenticated photographic evidence.

Essential resources

Access to a range of suitable animals from the range encompassing mammals, birds, fish, insects, reptiles and amphibians, and to feed rooms, feeds, transport and movement facilities is essential, with appropriate levels of supervision available to support learning. Transport for visits to animal care establishments may be required for centres not able to provide sufficient opportunities to meet the assessment requirements in house. A range of books, pet care magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an animal unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready to progress to a higher level of study in an animal-related subject or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The textbooks listed below are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Alderton D – *The Illustrated Practical Guide to Small Pets and Pet Care* (Southwater, 2008)
ISBN 9781844765959

Elwood M and Ruelokke M – *Guinea Piglopaedia* (Ringpress Books Ltd, 2003)
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www.the-kennel-club.org.uk

The Kennel Club

Unit 23: Assist with Animal Accommodation

Unit code:	R/600/0470
QCF Level:	1
Credit value:	2

Unit aim

The learner will be able to assist with preparing and cleaning animal accommodation and comply with health and safety requirements.

Unit introduction

Developing the knowledge, understanding and practical skills needed to assist with the preparation and cleaning of small animal accommodation will be essential for learners hoping to find employment in the animal care industries. This unit will enable learners to develop the necessary skills and underpinning knowledge to be able to operate effectively at a support level in the workplace.

Practical ability, underpinning knowledge and awareness of health and safety when preparing and cleaning animal accommodation will be developed.

For the purposes of this unit, the term ‘small animals’ encompasses the range of small mammals, birds, fish, insects, reptiles and amphibians commonly kept as pets in the UK. Learners will be expected to work with this range of species in completing the unit with assessment covering a minimum of three contrasting species from the range.

The unit also provides opportunities to develop other skills such as working with others, improving own learning and performance, communication and using ICT.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with cleaning animal accommodation</p>	<p>1.1 Prepare the equipment and materials for the work</p> <p>1.2 Prepare the animal accommodation ready for cleaning</p> <p>1.3 Clean the animal's accommodation in accordance with instructions</p> <p>1.4 Leave the animal accommodation in the appropriate condition after cleaning</p> <p>1.5 Maintain health and safety, and the welfare of the animals, during their work</p>
<p>2 Be able to assist with maintaining animal accommodation</p>	<p>2.1 Check the animal accommodation in accordance with instructions</p> <p>2.2 Keep the animal accommodation safe and secure</p> <p>2.3 Correctly identify and report any hazards</p> <p>2.4 Dispose of waste in a safe manner and place</p>

Unit content

1 **Be able to assist with cleaning animal accommodation**

Cleaning animal accommodation: general husbandry routines eg unit protocols; equipment eg brooms, dustpans, brushes, scrapers, dustbins, nets, tanks, carrying boxes; materials eg substrates, cleaning materials, disinfectants

Health and safety: safe use of equipment and chemicals; COSHH; PPE

Animal welfare: the Five Needs; signs of health; signs of stress

2 **Be able to assist with maintaining animal accommodation**

Maintaining animal accommodation: safety and security eg fixtures and fittings, access, durability of materials

Hazards: sharp edges, holes, cracks, damage, wear and tear; reporting damage, wear and tear, environmental

Waste disposal: hazardous, non-hazardous, organic, inorganic, environmental considerations; equipment; methods

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be through a series of practical activities with a range of small animals in a range of situations. Both the cleaning and maintaining aspects of the unit can form integral parts of working in an animal unit and can be taught, practised and assessed in that environment. Naturally occurring opportunities should be exploited to put learners in a realistic situation. Learners will need to develop appropriate skills and knowledge during formative practical sessions. Assessment is likely to take place on a continuous basis during the programme, with assessment taking place when learners have developed the appropriate level of skill.

Learners can discuss with the tutor and peer group appropriate methods for cleaning and maintaining animal accommodation. The standards and methods discussed and agreed can then be implemented during practical work, which will be an essential part of the delivery of this unit.

A range of animals is likely to include mammals, birds, fish, insects, reptiles and amphibians, with accommodation for three different species required as a minimum.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussions to develop learner knowledge of health and safety and the welfare of animals whilst cleaning and maintaining accommodation.
Tutor demonstrations of unit procedures for cleaning animal accommodation and disposing of waste.
Practical work on an animal unit involving cleaning animal accommodation.
Practical work on an animal unit involving maintenance and repair of animal accommodation.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners are required to prepare equipment and materials for the work. Learners will need to be given a clearly stated task to carry out, to enable them to select and prepare the appropriate equipment and materials. Learners are likely to have had formative opportunities to carry out the cleaning of a range of animal accommodation before assessment. Assessment is likely to take the form of authenticated photographic evidence or an observation record (or a combination of both) for three different species of animal from the range covered by this unit. This criterion could be assessed with 1.2, 1.3, 1.4 and 1.5.

For 1.2, learners are required to prepare the animal accommodation ready for cleaning. This criterion is likely to be assessed with 1.1. If this is the case, the same instructions and assessment method could be used.

For 1.3, learners are required to clean the animal accommodation in accordance with instructions. This criterion could be assessed independently or with 1.1 and 1.2. Assessment could take the form of authenticated photographic evidence, with learners providing some annotations to explain the actions in the photographs. Learners need to be assessed in relation to three contrasting types of animal accommodation.

For 1.4, learners are required to leave the animal accommodation in an appropriate condition after cleaning. This criterion should be assessed with 1.3 and the same assessment method applied, with the possible addition of an observation record stating learners have left the accommodation in an appropriate condition after cleaning.

For 1.5, learners are required to maintain health and safety, and the welfare of the animals, during their work. This criterion needs to be assessed over a given time period so learners can demonstrate awareness of the different health, safety and welfare requirements of at least three contrasting species. Assessment could take the form of a photographic storyboard annotated by the learner showing the health, safety and welfare considerations for the three selected species.

For 2.1, learners are required to check the animal accommodation in accordance with instructions. Learners will need to be given clear instructions about the purpose of the checks to be carried out. Assessment could take the form of either an observation record, authenticated photographic evidence, or a combination of both. Learners need to be assessed in relation to three contrasting types of animal accommodation from the range covered by the unit.

For 2.2, learners are required to keep the animal accommodation safe and secure. Naturally occurring assessment opportunities should be exploited in this unit, where faults with accommodation are seen and require repair and maintenance. Ideally, learners should have the opportunity to repair or maintain three contrasting types of animal accommodation covering the use of a range of materials. Assessment evidence is likely to take the form of a combination of authenticated photographic evidence and tutor observation records.

For 2.3, learners are required to correctly identify and report any hazards. This criterion is likely to be assessed with 2.2, where the identified hazards can be repaired. Assessment evidence is likely to take the same format as for 2.2.

For 2.4, learners are required to dispose of waste in a safe manner and place. This is likely to be assessed with 1.3 and 1.4, where learners have cleaned out animal accommodation and have waste requiring disposal. It is anticipated that centres will have disposal systems and protocols in place that comply with current legislation. Assessment evidence is likely to take the form of a combination of authenticated photographic evidence and observation records showing learners have disposed of waste from a minimum of three contrasting species in a safe manner and place.

Essential resources

Access to a variety of suitable animals from the range encompassing mammals, birds, fish, insects, reptiles and amphibians and to feed rooms, feeds, bedding materials and substrates and accommodation is essential, with appropriate levels of supervision available to support learning. Transport for visits to animal care establishments may be required for centres not able to provide sufficient opportunities to meet the assessment requirements in house. A range of books, pet care magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an animal unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready to progress to a higher level of study in an animal-related subject or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The textbooks listed below are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

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The British Rabbit Council

www.the-kennel-club.org.uk

The Kennel Club

Unit 24: Assist with the Movement and Handling of Small Animals

Unit code:	T/502/5710
QCF Level:	1
Credit value:	1

Unit aim

The learner will be able to assist with the movement and handling of animals and comply with health and safety requirements.

Unit introduction

Developing the knowledge, understanding and practical skills needed to assist with the movement and handling of small animals will be essential for learners hoping to find employment in the animal care industries. This unit will enable learners to develop the necessary skills and underpinning knowledge to be able to operate effectively at a support level in the workplace.

Practical ability, underpinning knowledge and awareness of health and safety when moving and handling small animals will be developed.

For the purposes of this unit, the term 'small animals' encompasses the range of small mammals, birds, fish, insects, reptiles and amphibians commonly kept as pets in the UK. Learners will be expected to work with a minimum of three contrasting species in completing the unit.

The unit also provides opportunities to develop other skills such as working with others, improving own learning and performance, communication and using ICT.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Assist with moving animals on a site</p>	<p>1.1 Approach the animals calmly, confidently and in a way that is likely to minimise stress</p> <p>1.2 Assist with moving animals in accordance with instructions</p> <p>1.3 Assist with moving animals without damage to the health, safety and wellbeing of the animal or self</p> <p>1.4 Help to settle the animals in the new location in accordance with instructions</p> <p>1.5 Maintain health and safety, and the welfare of the animals, during their work</p>
<p>2 Assist with handling animals</p>	<p>2.1 Approach animals in accordance with instructions</p> <p>2.2 Handle animals in a manner likely to promote their co-operation and minimise the possibility of distress</p> <p>2.3 Handle animals in a manner that minimises the possibility of risk to the health and safety of the animal, self and other animals and people in the environment</p> <p>2.4 Monitor the animal's behaviour and its response to handling and report any problems to the appropriate person without delay</p> <p>2.5 Use handling methods, which promote health and safety and are consistent with relevant legislation and codes of practice</p>

Unit content

1 Assist with moving animals on a site

Moving animals: methods; preparation of receiving accommodation; facilities and equipment appropriate to the species being moved and situation eg carrying basket, carrying box, cage, tank; animal welfare considerations eg water, bedding, food, use of appropriate methods, facilities and equipment; monitoring of animal during transport; cleaning of facilities and/or equipment after transport; safe disposal of waste

Health and safety: identification of personal risk from species being handled eg bites, scratches, urine, faeces, parasites; Personal Protective Equipment (PPE); personal hygiene; first aid methods and facilities; accident reporting

2 Assist with handling animals

Health and safety: identification of personal risk from species being handled eg bites, scratches, urine, faeces, parasites; Personal Protective Equipment (PPE); personal hygiene; first aid methods and facilities; accident reporting

Handling: method(s) appropriate to species and condition of animal eg approach to animal; use of restraint equipment eg lead, collar, muzzle, net, grasp, halter; safe positioning of hands; minimising distress and promoting cooperation; normal behaviour for the species being handled; signs of stress and distress eg heart rate, respiration rate, vocalisations; consequences of poor handling

Welfare considerations: relevant codes of practice; minimising stress through use of appropriate handling methods and equipment

Essential guidance for tutors

Delivery

This unit is likely to be delivered through a series of practical activities with a range of small animals in a range of situations. Both the transport and handling aspects of the unit can form integral parts of working in an animal unit and can be taught, practised and assessed in that environment. Naturally occurring opportunities, such as when animals are moved out of their accommodation so that it can be cleaned out, or when an animal requires grooming, should be exploited to put the learners in a realistic situation. Learners will need to develop the appropriate skills and knowledge during formative practical sessions. Assessment is likely to take place on a continuous basis during the programme, taking place when learners have developed the appropriate level of skill.

Learners can discuss with the tutor and peer group appropriate welfare considerations and methods of handling and transport for a range of animal species. The standards and methods discussed and agreed can then be implemented during practical work, which will be an essential part of the delivery of this unit.

For the purposes of this unit, the term ‘small animals’ encompasses the range of small mammals, birds, fish, insects, reptiles and amphibians commonly kept as pets in the UK. Learners will be expected to provide assessment evidence relating to a minimum of three contrasting species in completing the unit.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussions to develop learner knowledge of welfare, legislation and codes of practice.
Tutor demonstrations of handling techniques and procedures for moving animals.
Practical work on an animal unit involving moving animals as part of routine animal care tasks.
Practical work on an animal unit involving handling animals as part of routine animal care tasks.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners are required to approach animals calmly, confidently and in a way that is likely to minimise stress. This will be evidenced most clearly through observation records for a range of animal species carried out over the duration of the unit.

For 1.2, learners are required to assist with moving animals in accordance with instructions. This is likely to be assessed in a similar way to 1.3 and may be assessed at the same time as 1.1. Instructions should be made clear to learners and recorded in the observation record.

For 1.3, learners are required to assist with moving animals without damage to the health, safety and wellbeing of the animal or self. Whilst assessment of this criterion is most likely to take the form of an observation record, it will be important to record the likely risks to the health, safety and wellbeing of the animal and how these could be minimised.

For 1.4, learners are required to help settle the animals in the new location in accordance with instructions. This is likely to be assessed in a similar way to 1.1, with the instructions to learners being recorded on the observation record. This criterion will need to be assessed on several occasions to encompass a minimum of three contrasting species, locations and instructions.

For 1.5, learners are required to maintain health and safety, and the welfare of the animals, during their work. This will be evidenced most clearly through ongoing assessment during the assessment for 1.1, 1.2, 1.3 and 1.4. Observation records will need to demonstrate consistent performance over time with a minimum of three suitable contrasting species.

For 2.1, learners are required to approach animals in accordance with instructions. Assessment of this criterion is likely to form an integral part of the assessment for 2.2. Observation records are likely to be the most appropriate method of recording assessment.

For 2.2, learners are required to handle animals in a manner likely to promote their cooperation and minimise the possibility of distress. Learners will need to identify to their tutor the factors that will promote cooperation during their handling of the animal species, and the signs of distress in the chosen species and how they can be minimised. This could take the form of a discussion record between the tutor and learner.

For 2.3, learners are required to handle animals in a manner that minimises the possibility of risk to the health and safety of the animal, themselves and other animals and people in the environment. Assessment is likely to take the form of a discussion between the tutor and learner identifying the possible risks to the health and safety of the animal, self and other animals and people in the environment before a practical assessment, during which learners will be assessed directly on their performance. Learners will need to be assessed during appropriate practical activities such as grooming or health checking an animal.

For 2.4, learners are required to monitor the animal's behaviour and its response to handling and report any problems to the appropriate person without delay. Before assessment, learners will need to identify what is normal behaviour for the target species, in order to monitor against agreed norms. Assessment is likely to take the form of an observation record with tutor questioning during the assessment.

For 2.5, learners are required to use handling methods that promote health and safety and are consistent with relevant legislation and codes of practice. Assessment for this criterion should focus on learner performance rather than familiarity with relevant legislation and codes of practice. Learners should be aware of the standards set by appropriate legislation and codes of practice and carry out assessed tasks in line with these standards. Assessment is likely to be linked to that for 2.2 and 2.3 and take the form of an observation record.

Essential resources

Access to a variety of suitable animals from the range encompassing mammals, birds, fish, insects, reptiles and amphibians, and to feed rooms, feeds, transport and movement facilities is essential, with appropriate levels of supervision available to support learning. Transport for visits to animal care establishments may be required for centres not able to provide sufficient opportunities to meet the assessment requirements in house. A range of books, pet care magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct Personal Protective Equipment (PPE).

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an animal unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready to progress to a higher level of study in an animal-related subject, or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The books listed below are indicative only. Centres are encouraged to use other resources that suit learners' needs.

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Unit 25: Assist with the Maintenance of Grass Surfaces

Unit code: D/502/4177

QCF Level: 1

Credit value: 3

Unit aim

This unit aims to give the learner the skills required to assist in the maintenance of grass surfaces by mowing, edging and watering; using pedestrian operated machinery and hand tools, and comply with all health and safety requirements.

Unit introduction

This unit introduces learners to the skills and knowledge they will need to assist with the maintenance of grass surfaces. It also introduces them to the machinery, tools and equipment required to maintain grassed surfaces.

Learners will be given the opportunity to assess sites for their condition and maintenance requirements, and to select appropriate tools and equipment. They will also have the opportunity to practise mowing, edging and irrigation on grass surfaces whilst minimising the damage to the grass surface, the environment and wildlife.

Learners will be expected to maintain the health and safety of themselves and others at all times.

There will be an emphasis on health and safety and on keeping the work area clean and tidy.

Learners will work independently on some tasks and in teams for others, as appropriate. The unit will help learners to develop the vocational and personal qualities that potential employers require.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with maintaining grass surfaces</p>	<p>1.1 Ensure that conditions and the surface are suitable for maintenance in accordance with instructions</p> <p>1.2 Ensure that the tools and equipment being used are appropriate to the conditions and the surfaces being maintained</p> <p>1.3 Use appropriate methods for maintaining grass surfaces safely and in accordance with instructions</p> <p>1.4 Carry out the work so that the grass height and edges meet requirements</p> <p>1.5 Report any problems as soon as possible to the appropriate person</p> <p>1.6 Minimise any damage to grass, features, services and wildlife on the site</p> <p>1.7 Dispose of grass cuttings correctly</p> <p>1.8 Leave the site in a clean and tidy condition</p> <p>1.9 Clean and store tools and equipment promptly and securely</p>
<p>2 Be able to work safely</p>	<p>2.1 Maintain the health and safety of self and others at all times</p> <p>2.2 Select, prepare and use tools and equipment safely, efficiently, and correctly</p>

Unit content

1 Be able to assist with maintaining grass surfaces

Assist with maintaining grass surfaces: suitable condition of site and surface for maintenance eg moisture status, height, compaction; safe use, cleaning and storage of tools and equipment eg tined rake, edging shears, turfing iron, pedestrian operated mowers (eg cylinder, rotary), brush, hosepipe, sprinkler attachments; use of eg pedestrian operated mower, edging shears, turfing iron, mechanical edger; correct level of irrigation with sprinklers; methods of checking for problems and reporting; correct disposal of arisings; methods of avoiding damage to grass surface and wildlife

2 Be able to work safely

Work safely: reasons for and methods of keeping work area free of potential hazards; manual handling techniques specific to mower use; methods of disposing of waste (grass arisings); simple risk assessment forms; current relevant health and safety legislation, PUWER, PPE; correct use, maintenance and storage of tools and equipment

Essential guidance for tutors

Delivery

This unit is intended to give learners experience of using the grass surface maintenance skills needed to ensure that grassed areas are visually attractive, together with the basic background knowledge required to underpin practical skills. Learners must have the opportunities to develop practical skills and knowledge through the use of supervised classroom, workshop and outdoor activities and demonstrations of the equipment and techniques involved.

Emphasis should be placed on safe and effective working practices for all practical tasks being undertaken. Instruction in the use of machinery must be provided by a competent person. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help learners improve their social and problem-solving skills.

The use of all tools and equipment listed in the *Unit content* should be encouraged. Tutors should demonstrate the knowledge, skills and techniques associated with the maintenance of grass surfaces and learners must practise all these techniques.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Tutors to advise learners how to assess sites and surfaces for their suitability for maintenance, eg moisture status and grass height.</p> <p>Learners shown the tools and equipment. Tutor-led discussion/demonstration on uses and safety of all relevant tools and equipment including pre-start checks on machinery. Learners work individually on tool and equipment identification sheets.</p> <p>Videos on health and safety, specifically related to use of mowers, and use of manufacturers' handbooks. Learners should be made aware of the relevant manual-handling techniques and the risks to the operator if these are not followed. Learners should practise using all tools and equipment under supervision, including pedestrian operated mowers and hand and mechanical edging tools. Learners visually monitor grass surface for moisture status and apply sprinkler irrigation as required. Tutor-led discussion on why these tasks are important in maintaining the visual amenity and health of grassed surfaces.</p>
<p><i>Assessment:</i> Practical test on assessing sites evidenced by practical record sheet. Practical identification test of numbered tools and equipment. Practical test on mowing, including pre-start checks, evidenced by practical record sheet. Practical test on edging grass surfaces by hand, evidenced by practical record sheet. Practical test on setting up and dismantling irrigation equipment, evidenced by practical record sheet.</p>
<p>Learners can contribute to a simple group risk assessment or fill out an individual risk assessment. Learners must keep work area tidy and clean and store all tools and equipment after use. Tutor-led discussions on the importance of health and safety legislation and the importance of keeping the work area tidy and maintaining tools and equipment.</p>
<p><i>Assessment:</i> Health and safety assessment will be integrated into the assessment of all practical work and evidenced on practical marking sheets. Learners should also complete a simple risk assessment in writing or verbally for each task.</p>

Assessment

Learners can build a small portfolio of evidence linking the tasks undertaken to the learning outcomes and assessment criteria.

Many criteria will need to be assessed by the tutor through direct observation during practical maintenance activities. Evidence should include direct observation records listing the component parts of the task, including tool selection and health and safety requirements, and/or witness statements.

Some of the criteria may be assessed through completed forms or paperwork, such as risk assessments. This evidence should be marked and signed by the tutor and placed in the portfolio. Guidance on the use of witness statements and observation records can be found on the Edexcel website.

Although there is no time limit for assessment, it is assumed that assessment of individual tasks should not exceed one hour.

To achieve 1.1, learners must demonstrate that they can assess the condition of the grass surface, in terms of height and moisture status, and its suitability for maintenance.

To achieve 1.2, learners must be able to select the correct tools and equipment for at least two specific operations, such as mowing and watering.

To achieve 1.3, learners must demonstrate the ability to cut, edge and irrigate grass safely, following instructions.

To achieve 1.4, learners must mow grass to a uniform height, avoiding gaps, and create a neat edge to a grassed area, either by clipping with edging shears or by using an edging iron.

To achieve 1.5, learners must demonstrate an ability to identify problems and report them to a relevant person.

To achieve 1.6, learners must carry out practical tasks with minimal damage to the grass surface, the wider environment or to wildlife.

To achieve 1.7, learners must dispose of all grass cuttings in a specified place as instructed.

To achieve 1.8, learners must demonstrate that they can leave a work site clean and tidy.

To achieve 1.9, learners must clean and correctly store at least two tools or pieces of equipment they have used.

To achieve 2.1, learners must assist in compiling a simple risk assessment relating to a grass surface maintenance activity, and must demonstrate that they can work safely in all tasks and maintain a safe work environment. This can be evidenced by the tutor on practical assessment sheets.

To achieve 2.2, learners must demonstrate that they can use at least two tools and one piece of equipment safely and correctly.

Essential resources

The minimum requirement for delivery of this unit is an area of well-established grass. Each learner should have a medium-sized grass area for assessment, and there must be sufficient grass to allow adequate practice before assessment. Suitable mowers, edging tools and sprinklers are required, as is an area for cleaning and storing tools. Manufacturers' handbooks should be available for machinery and a risk assessment pro forma may be useful.

Employer engagement and vocational contexts

Learners undertaking this unit could benefit from visiting local parks and gardens and assessing the quality of the grassed surfaces and their maintenance. A talk by the head gardener would emphasise the importance of regular maintenance. This would also highlight future employment prospects within the industry.

Indicative resource materials

Textbooks

Fish M – *Lawns: Grow and Maintain Healthy Grass* (Collins, 2005) ISBN 9780007182664

Hessayon Dr D G – *The Lawn Expert* (Expert Books, 1997) ISBN 9780903505482

RHS Practical Guides – *Lawns and Ground Cover* (Dorling Kindersley, 2002)
ISBN 9780751347258

Journal

Horticulture Week includes items on turf grass maintenance and machinery and also carries relevant job advertisements. However, subscription is not necessary for this unit.

Website

www.rhs.org.uk

Unit 26: Soil Identification and Testing

Unit code: D/502/4552

QCF Level: 1

Credit value: 4

Unit aim

The practical activities in this unit will enable the learners to understand what soil is and how different plants have preferences for certain types of soil. Learners will be able to separate and measure different components that soil is made of, as well as appreciating their importance for plant growth. Learners will also find out the effect that plants and animals have on soil, eg the effect of worms on drainage and aeration and the effect of organic matter on soil composition and plant growth. In addition, learners will test for soil pH and nitrate levels and investigate what sorts of plants grow best in different soil conditions. Learners will also understand what is meant by 'NPK' for soils.

Unit introduction

The emphasis in this unit is on developing practical skills as well as understanding. The unit will give learners opportunities to:

- measure soil components
- measure soil water, pH and nitrate levels
- explore how to treat soil to encourage growth of particular plants
- explore the importance of decomposers and earthworms for soil quality
- appreciate which plants prefer which particular types of soil and how to use this information in a garden or allotment.

Wherever possible, learners should be encouraged to work in pairs or groups since working with others is also an important feature of working in the horticulture industry. However, learners must be encouraged to ask for help whenever it is needed and to respond to any guidance given by tutors or their peers.

Learners should keep a record of all their observations and results, perhaps as a simple PowerPoint presentation that they can present to the rest of the group and talk through, answering any questions from their peers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to measure the amounts of air, humus and particles in soil	1.1 Estimate the amounts of air, humus and different size particles in soils
2 Be able to measure the water content of soil	2.1 Measure how much water different samples of soil contain
3 Be able to measure the pH of soil	3.1 Measure the pH of different types of soil
4 Be able to measure the nitrate, phosphate and potassium content of soil	4.1 Measure the nitrate, phosphate and potassium content of different types of soil
5 Know the importance of soil water, pH, nitrate, phosphate and potassium levels for plant growth	5.1 State how soil helps to provide water needed by plants 5.2 State the effect of lime or ericaceous compost on soil pH 5.3 State how the nitrate content affects plant growth and the humus content 5.4 State the effects of phosphate and potassium on plant growth
6 Know how to treat soil in order to encourage plant growth	6.1 State how to modify different types of soil to encourage growth of plants that require different soil conditions
7 Know about the importance of decomposers and earthworms for soil quality	7.1 State the main decomposing agents of soil 7.2 Describe how worm distribution affects soil quality 7.3 Describe how bacteria and fungi affect soil humus and nitrate
8 Know which types of soil are preferred by different plants	8.1 Identify plant preferences for different soil types, pH and nitrate content 8.2 State the importance of humus or compost in boosting nitrate levels 8.3 State the importance of nitrogen, phosphorous and potassium ('NPK') for optimum plant growth

Unit content

1 Be able to measure the amounts of air, humus and particles in soil

Soil content: air; humus; rock particles eg clay, silt, sand, larger stones

2 Be able to measure the water content of soil

Measure water content: oven, dry soil; weigh

3 Be able to measure the pH of soil

Measure pH: weigh soil; distilled water, filter, universal indicator

4 Be able to measure the nitrate, phosphate and potassium content of soil

Measure nitrate content: soil testing kit, nitrate test sticks

Measure phosphate content: soil testing kit

Measure potassium content: soil testing kit

5 Know the importance of soil water, pH, nitrate, phosphate and potassium levels for plant growth

Water: needed by plants, roots, photosynthesis; wilting indicates shortage

pH: acid, alkaline, neutral; ericaceous, peat, lime, chalk

Nitrate: needed for plant growth; ammonia, amino acids, protein, enzymes

Phosphate: only needed in small amounts for plant growth, shoot growth, blooming; nucleic acids such as DNA, membranes

Potassium: needed for different enzyme systems and controls root growth, protein, fruit quality

6 Know how to treat soil in order to encourage plant growth

Treat soil: ie add peat, chalk, 'NPK'

7 Know about the importance of decomposers and earthworms for soil quality

Decomposers: fungi and bacteria needed to break down humus

Earthworms: break down humus and break down soil in to smaller particles increasing aeration

8 Know which types of soil are preferred by different plants

Types of soil:

Loam – the ‘ideal’ soil has less than 52% sand, between 28% and 52% silt and 7% to 27% clay. Most plants will flourish in loam soil, especially root crops

Chalk – eg cistus shrubs, Cox’s orange pippin apples

Peaty – eg coniferous trees and shrubs such as pine, deciduous trees and shrubs such as acers

Acid – eg shrubs such as azaleas and rhododendrons

Sandy – eg lavender, cistus, poppies

Clay – eg hydrangea, foxglove, lilac

Essential guidance for tutors

Delivery

It is intended that this unit will give learners relevant practical experience of the scientific examination of soil types before any vocational work in the horticultural industry. The unit has been designed to provide the basic knowledge, understanding and skills needed to understand the importance of not only soil type, but also the pH and nitrogen content together with other minerals such as potassium and phosphate.

Learners must have the opportunity to develop their knowledge and, more importantly, their practical skills. This should be facilitated through use of supervised laboratory and field activities together with demonstrations of the equipment and techniques involved.

The most important part of this unit is the practical work. This is what will enthuse learners. It is essential that learners can demonstrate their skill in measuring soil air, water, humus, nitrate and pH practically. To do this they must be able to use the correct equipment such as beakers, measuring cylinders, soil testing kits etc. Tutors will therefore need to demonstrate some of these skills and support learners where necessary. It is essential that learners are assessed on what they can do, rather than on what they find difficult. Tutors will need to encourage learners to ask for help where appropriate and to develop the reliable, positive and enthusiastic qualities that employers may be interested in.

Learners and tutors are encouraged to view this unit as a ‘taster’, in that it gives the learner an opportunity to experience the type of work involved in horticulture and soil science.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Be able to measure the amounts of air, humus and particles in soil</p> <p>Thoroughly and carefully, mix 100 cm³ of undisturbed soil with 100 cm³ of water in a 250 cm³ measuring cylinder and estimate the amount of air, humus and different size rock particles ie clay, silt, sand and larger stones. Draw and label findings – which particles sink the fastest? Notice that the volume is less than 100 cm³ due to loss of the air enabling measurement of % of air. Leave for one week and then re-examine. Observe that smallest particles are clay that settles slowly and largest are small stones or gravel that settle more quickly.</p> <p>Use this procedure to compare two quite different soils, one where plants are flourishing and one where they are not or where the plants are quite different.</p>

Topic and suggested assignments/activities**Be able to measure the water content of soil****Be able to measure the pH of soil****Be able to measure the nitrate, phosphate and potassium content of soil****Know the importance of soil water, pH, nitrate, phosphate and potassium levels for plant growth**

Weigh out 5 g of soil in a crucible then dry out in an incubator or leave for a week. Re-weigh, calculate loss in mass of water (multiply by 20 to give % for more able learners).

Measure the pH of at least three different types of soil eg peaty, chalky or loam. This could be carried out using real soil samples or samples made up in the laboratory. Add equal amounts of the soil (perhaps 10 g) to 10 cm³ of water and filter. Know why equal amounts of soil must be used in this investigation, ie fair test. Add 5 drops of Universal Indicator and record colour. pH 7 (neutral) is green, pH 6 (acid) is yellow, pH 5 (more acid) is orange, pH 8 (alkaline) is blue/green.

Measure the pH using this method on different types of compost, including ericaceous.

Measure the nitrate content of soil or compost using a soil kit eg kit from <http://www.westmeters.co.uk> that does at least 50 tests for N, P and K. Compare the 'pink' colours from soil samples with samples of different types of compost from garden centres.

Use the same kit to measure the phosphate (P) and potassium levels (K) of the soil or compost samples. Compare the 'blue/green' colours for phosphate and the 'cloudiness' for potassium of soil samples with different types of compost from garden centres.

Relate these findings to how well plants grow and the humus content.

Know how to treat soil in order to encourage plant growth

Carry out **at least one** experiment to alter the characteristics of a 'given soil sample' in order to encourage the growth of a **named** plant, eg add lime and sand to a clay soil to encourage drainage; add ericaceous compost to lower the pH and encourage growth of azaleas or rhododendrons or add lime/chalk to treat an acid soil.

Know about the importance of decomposers and earthworms for soil quality

Choose two quite different locations. Add some washing up liquid (2 or 3 squirts) to a full bucket of water, mix and pour over an area of about 1 m² in each location. Count how many earthworms come up in the next 10 minutes. Repeat if necessary. Compare the total number of worms for each location and relate this to the environment observed. Does the worm count relate to the humus content (simple treatment)?

Know about the importance of decomposers and earthworms for soil quality

Carry out one of Charles Darwin's experiments on worm activity ie in March or October, select 1 m² areas of soil in different environments and over a period of days count the number of worm casts produced. Extension work could be to remove the casts carefully and weigh them. Relate worm 'activity' to the soil quality. Higher humus content or good plant growth should be associated with higher levels of worm activity that break down soil particles and humus, increasing both soil air and available nitrogen content.

Topic and suggested assignments/activities
<p>Know about the importance of decomposers and earthworms for soil quality</p> <p>Put nutrient and malt agar plates in different places and remove lids eg by compost heap, out in open, indoors. Replace lids after 10 minutes, tape up and incubate at room temperature for a few days. Observe microbial growth and notice that more moulds and bacterial colonies seem to grow when out of doors, near compost heaps or decaying matter. Alternatively, try this by adding a small amount of humus rich soil or poor soil directly to the plates and recording microbial growth.</p>
<p>Know which types of soil are preferred by different plants</p> <p>Research into what sort of plants prefer different conditions eg azaleas prefer acid soil, all plants need nitrogen (nitrate) for making protein and growing best, peanuts prefer pH 5-6.5, mint pH 7-8, potato pH 5.5-6. Know that most plants prefer a soil pH of between 6 and 7.</p> <p>Research into the importance of humus and relate this to nitrate measurements.</p> <p>Research into importance of 'NPK' for plants; relate this to any experimental findings (N-nitrogen, P-phosphate, K-potassium).</p>
<p>Know which types of soil are preferred by different plants</p> <p>Grow cress, pea or bean seedlings either in a greenhouse or on a windowsill under different conditions ie in vermiculite (with no added nutrients), different types of compost with or without added acid/chalk, waterlogged to lower soil air. Measure plant growth simply, eg height or number of leaves and relate this to other experimental findings.</p>
<p>Optional: if possible organise a visit to places such as garden centres, organic farms or nature reserves, so that learners can put their findings into context as well as being able to ask questions about 'Soil Science in the Workplace' (simple treatment only). If this is not possible, use the time to carry out internet research instead. Use these findings as part of the presentation.</p>
<p>Know which types of soil are preferred by different plants</p> <p>Give a simple presentation on two key findings from practical work and relate this to what has been found out about plant preferences for certain types of soil conditions, pH or 'NPK' both from research and any visits carried out.</p>

Assessment

Achievement of assessment criteria should be evidenced through vocationally-related practical experiences, with tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would require observation records and/or witness statements.

For 1.1, learners must be able to use the correct apparatus to measure the amount of air and humus in soils and be able to estimate the amounts of different soil particles such as sand or clay.

For 2.1, learners must be able to use the correct apparatus to measure how much water different soil samples contain.

For 3.1, learners must be able to use the correct apparatus to measure the pH of different soil samples.

For 4.1, learners must be able to use standard laboratory equipment or a soil testing kit to measure the nitrate, phosphate and potassium content of different types of soil.

For 5.1, learners must be able to state how soil helps to provide the water plants need. For 5.2, learners must state the effect of lime or ericaceous compost on soil pH. For 5.3, they need to state how the humus content of soil affects plant growth by increasing the level of nitrate, and for 5.4, they need to state the effects of phosphate and potassium on plant growth.

For 6.1, learners will need to state how to modify different types of soil to encourage the growth of plants that require different soil conditions. They will need to use their experimental findings and research in order to do this effectively.

For 7.1, 7.2 and 7.3, learners must state the main decomposing agents of soil and describe how worms, bacteria and fungi affect soil humus and nitrate and can, therefore, enhance plant growth.

For 8.1, 8.2 and 8.3, learners need to name at least two plants and identify their preferences for different soil types, pH and nitrate content, taking into account the importance of humus or compost in boosting nitrate levels, and the importance of nitrogen, phosphorous and potassium ('NPK') for optimum plant growth.

Essential resources

Standard laboratory equipment such as beakers, measuring cylinders, oven, filter paper, filter funnels and simple soil testing kits are required. Where available, microscopes, lenses and slides may be used to identify soil particles.

Employer engagement and vocational contexts

Any large garden centre will be useful for a visit to see soil science in action.

Indicative resource materials

Textbooks

Alcott L – *The Royal Horticultural Society: Vegetable and Fruit Gardening* (Dorling Kindersley, 2008) ISBN 9781405331267

Brickell C – *The Royal Horticultural Society: Encyclopaedia of Plants and Flowers* (Dorling Kindersley, 2008) ISBN 9781405330978

Fruit and Vegetable Gardening (Reader's Digest, 2007) ISBN 9780276442056

In addition, plenty of detailed, practical information can be found in a variety of websites such as those listed below.

Websites

<http://en.wikipedia.org/wiki/Soil>

<http://homepage.mac.com/gardensbyivydene/Plants/plantsforpeatyso.html>

<http://theseedsite.co.uk/soil.html>

www.applegategardens.co.uk/acatalog/garden_soil_sunlight.html

www.bbc.co.uk/gardening/htbg/module1/soil_types1.shtml

www.findmeplants.co.uk

www.gardeninghelpuk.com/plants_for_sandy_soils.htm

www.opticsplanet.net/jt-baker-ion-specific-test-strips-j-t-baker-4415-01.html

www.soilassociation.org

www.westmeters.co.uk

Unit 27: Assist with Planting and Establishing Plants

Unit code:	F/502/4088
QCF Level:	1
Credit value:	3

Unit aim

This unit requires learners to assist with the establishment of plants. Activities can take place in nursery or amenity situations; outdoors or under protected conditions and must comply with health and safety requirements.

Unit introduction

This unit introduces learners to the practical skills needed to plant and establish planting immediately afterwards. This can take place in outdoor or protected cropping situations and can cover seeds, seedlings, potting on, or planting outdoors using bedding plants, herbaceous plants, trees and shrubs. When carrying out planting, the correct preparation of the planting medium must be covered.

Establishment methods may include correct watering, mulching, suitable pest prevention and providing support, such as tree stakes, wigwams and trellis.

Emphasis is placed on safe working practices when undertaking planting and establishment tasks.

Learners will be given time to practise the skills required for each task before assessment takes place.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members when planting and establishing plants, and when keeping the working area safe and tidy. The unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with carrying out planting	1.1 Select the necessary tools, materials and personal protective equipment for the job 1.2 Carry out any necessary preparation of the planting medium according to instructions 1.3 Transport plants as instructed 1.4 Keep the plants in a suitable condition before planting 1.5 Carry out planting as instructed 1.6 Position the plants at the correct spacing, depth and orientation according to instructions 1.7 Report any problems that occur as soon as possible 1.8 Maintain and store tools and equipment appropriately
2 Be able to assist with any additional activities required to establish plants	2.1 Prepare the necessary tools, materials and personal protective equipment for the job 2.2 Provide support, shelter or mulching as necessary and carry out plant labelling as instructed 2.3 Provide the plants with necessary moisture 2.4 Maintain and store tools, personal protective equipment and materials correctly 2.5 Report any problems that occur to the appropriate person as soon as possible
3 Be able to work safely	3.1 Use tools, materials and any personal protective equipment safely and correctly 3.2 Maintain the health and safety of self and others at all times

Unit content

1 Be able to assist with carrying out planting

Tools and equipment: types and uses of eg spade, fork, shovel, trowel, wheelbarrow, rake, gardening gloves and steel toecap boots; uses within the planting situation

Preparation of planting medium: assessing the planting medium and recognising the correct method of improvement eg correct compost mix and added nutrients for protected cropping, digging and improving drainage of the planting area by adding soil improvers for outdoor planting

Transport and care of plants: reasons for and methods of correct stacking and movement of plants to the planting area; ensuring they do not dry out or become damaged while in transport and before planting

Carrying out planting: reasons for planting at the correct depth or to the nursery line if plants have previously been lifted; correct firming in of the medium to ensure root contact with the new growing position; correct spacing of plants if mass planting is taking place

Reporting of problems: how to recognise problems or potential problems; notify person in charge

Storage and cleaning: reasons for cleaning and correct storage of tools

2 Be able to assist with any additional activities required to establish plants

Preparation of tools and equipment: types and suitability for tasks eg secateurs, shovel, wheelbarrow, rake, stakes, canes, mulch, watering can or hose, steel toecap boots, gardening gloves, any necessary signage

Support and shelter: reasons for providing plant protection; different materials for providing the correct protection within the planting situation; what constitutes shelter for plants and methods of providing shelter; use of tree stakes, guards and tree ties

Providing plants with moisture: correct watering of seeds, seedlings, transplants, bedding plants, herbaceous plants, trees and shrubs to ensure early establishment

Reporting of problems: how to recognise problems or potential problems; notify person in charge

Storage and cleaning: reasons for cleaning and correct storage of tools

3 Be able to work safely

Tools, materials and PPE: awareness of dangerous practices; need for protective equipment

Health and safety: risk assessment forms; reasons for and methods of keeping work area free of potential hazards that could cause injuries to the group or others; current, relevant legislation; PPE

Essential guidance for tutors

Delivery

This unit is intended as an introduction to the requirements, including health and safety, for undertaking planting and establishment operations, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and practical planting and establishment skills through use of supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

This unit has been designed to provide the introductory knowledge and skills needed to undertake planting and initial establishment. It is recognised that planting situations may differ between centres and teaching must be tailored to meet the needs of the planting situation. Emphasis must be placed on safe and effective working practices for all practical tasks being undertaken. The use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working as a team should help learners improve their social and problem-solving skills.

The use of all tools listed in the *Unit content* should be encouraged, although other tools can be used or substituted depending on the planting area.

Tutors should demonstrate the various techniques and skills needed to plant and establish planting correctly and learners must practice all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with establishing various plant material, watering, staking, guarding and mulching newly planted areas.

Correct spacing of plants is mentioned within the assessment criteria, but it should be recognised that some plants are placed and planted as individual specimens, so height and spread can be discussed but actual spacing may not be relevant. If this is the situation it must be evidenced clearly within the assessment.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Be able to assist with carrying out planting</p> <p>Learners shown the tools and equipment. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners work individually on tool and equipment identification sheets. Videos or presentations can be shown on relevant health and safety. Learners complete risk assessment sheets individually. Learners clean and store tools after practical sessions. Tutor-led discussion on why this is an important part of the job.</p> <p>When preparing a medium for planting, tutor-led, onsite discussion on what improvement the medium may need before planting takes place. Emphasis should be on the best ways of improving air and water retention within the medium. Demonstrations on the best way to improve the medium should be given before learners complete the practical.</p>

Topic and suggested assignments/activities

A tutor-led discussion and question session on possible risks to plants during transportation, with learners encouraged to supply practical solutions. Plants that have not been watered could be left in sunny or windy situations to demonstrate visually the problems that could occur if plants are poorly transported or left before planting takes place.

A practical demonstration of the correct planting method could be given to enable learners to understand what the finished product should look like. A tutor-led discussion on the possible effects of poor planting could also be carried out, highlighting problems with planting too high or too low and lack of firming in. The correct spacing for the planting situation should be clearly stated and demonstrated so that learners can reproduce this in their own practical application.

If any problems occur during this process, learners are to be encouraged to report the problem, and with careful questioning from the tutor, find an appropriate solution.

Be able to assist with carrying out planting

Assessment: to ensure all assessment criteria are met, it is advised that the tutor devises an assessment sheet that covers health and safety, correct selection and use of tools, preparation of growing medium, transportation and care before planting, correct planting method for the given practical, a box for recording any problems reported and correct storage of tools.

A completed individual risk assessment can be attached, along with any witness statements that could back up the assessment.

If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.

Be able to assist with any additional activities required to establish plants

Learners shown the tools and equipment. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners work individually on tool and equipment identification sheets. Videos or presentations can be shown on relevant health and safety. Learners complete risk assessment sheets individually. Learners to clean and store tools after practical sessions. Tutor-led discussion on why this is an important part of the job.

The tutor could give a demonstration on the correct method of providing aftercare for the given planting situation. A tutor-led discussion and demonstration of the correct ways of giving plants adequate moisture could be undertaken. Learners should be encouraged to highlight possible problems that could occur if aftercare is not carried out satisfactorily. Learners could produce a factsheet showing the range of plant protection methods on offer to defend against larger pests when planting outdoors, such as rabbits and deer. Also the range of organic and synthetic mulches available, showing some advantages and disadvantages of each.

If any problems occur during this process, learners are to be encouraged to report the problem and, with careful questioning from the tutor, find an appropriate solution.

Be able to assist with any additional activities required to establish plants

Assessment: to ensure all assessment criteria are met, it is advised that the tutor devises an assessment sheet that covers health and safety, correct selection and use of tools, correct support and shelter provided, watering carried out thoroughly for the planting situation, a box for recording any problems reported and correct storage of tools.

A completed individual risk assessment can be attached to this, along with any witness statements that could back up the assessment.

If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.

Topic and suggested assignments/activities
<p>Be able to work safely</p> <p>Learners can produce posters or PowerPoint presentations, in groups or as individuals, showing the health and safety and PPE required for planting and establishment operations. Tutors to assist with highlighting dangers and making learners aware while on practicals. Learners should be encouraged to alert each other to safety issues and find appropriate solutions.</p>
<p>Be able to work safely</p> <p><i>Assessment:</i> there is no need to assess this part separately and assessment should be integrated into the planting and establishment operations.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Most criteria will need to be assessed directly by the tutor during planting and establishment operations. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. If using video evidence, the permission of parents/guardians should be obtained before carrying out the assessment. The video must show clearly all activities required to achieve the criteria and feedback must be delivered promptly. Some of the criteria may be assessed through the correct completion of forms. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one and a half hours.

To achieve 1.1, learners must select two tools and one piece of equipment or PPE used for planting or preparing ground.

To achieve 1.2, learners must prepare the planting medium as instructed. This can be evidenced by a witness statement signed by the tutor.

To achieve 1.3, learners must transport the plants correctly as instructed.

To achieve 1.4, learners must keep the plants in a suitable condition before planting as instructed.

To achieve 1.5, learners must carry out planting as instructed. This can be evidenced by a witness statement signed by the tutor.

To achieve 1.6, learners must demonstrate the ability to position plants at the correct spacing, depth and orientation as instructed. This may be evidenced by a witness statement signed by the tutor.

To achieve 1.7, learners must report any problems. This may be evidenced by a witness statement or added to the assessment sheet signed by the tutor.

To achieve 1.8, learners must maintain and store at least two tools or pieces of equipment that they have used.

To achieve 2.1, learners must prepare at least one tool, one material and one piece of PPE.

To achieve 2.2, learners must demonstrate the ability to provide support, shelter or mulching as instructed. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.3, learners must demonstrate the ability to water correctly, providing adequate moisture as instructed. This may be evidenced by a witness statement.

To achieve 2.4, learners must correctly maintain and store a tool, a material and a piece of PPE that they have used.

To achieve 2.5, learners must report any problems. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.1, learners must demonstrate they can use the selected tools and equipment safely. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.2, learners must complete an individual risk assessment for one task. They must also show and maintain awareness of health and safety when working on set tasks. This can be evidenced by a witness statement signed by the tutor.

Essential resources

The minimum requirement needed to deliver this unit is an area where planting can take place. This may be new or established borders or a protected cropping environment. Each learner should have access to enough plant material to enable adequate practice to achieve assessment standards. An area for storing and cleaning tools and PPE is needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local commercial growers, gardeners or commercial landscape firms. A talk by the producer or planting supervisor, explaining the need for correct planting techniques and suitable aftercare, would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry. Contacting local landscape firms may give learners an opportunity to see mass landscape planting taking place in their local area, alerting them to the benefits of large tree and shrub planting for the local environment.

Indicative resource materials

Textbooks

There are no specific textbooks about planting and establishment aimed at Level 1 learners. The textbooks listed refer to the subject and contain relevant picture guides.

Brickell C – *RHS Encyclopedia of Gardening* (Dorling Kindersley, 2007)
ISBN 9781405322270

Hessayon Dr D G – *The Garden Expert* (Pan Britannica, 1986) ISBN 9780903505222

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 28: Assist with Maintaining Plants

Unit code: H/502/4102

QCF Level: 1

Credit value: 4

Unit aim

This unit will require learners to assist with the maintenance of plants or crops including watering; spacing; observing and reporting problems; weeding; training and pruning. These activities can take place in nursery or amenity situations and outdoors or under protected situations. All health and safety issues will be addressed.

Unit introduction

This unit introduces learners to the tools and equipment used in plant maintenance operations.

Emphasis is placed on the correct selection and safe use of the equipment used in plant maintenance operations.

Learners will be given the opportunity to practise pruning, weeding, training, and reporting problems in established beds and borders or protected cropping environments within an acceptable timescale.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members by contributing to the maintenance of plants and to keeping the working area safe and tidy. This unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with maintaining the health of plants	1.1 Prepare the necessary tools, equipment and personal protective equipment for the job 1.2 Use correct methods to maintain the health of plants as instructed 1.3 Check the condition of plants and report any problems as instructed 1.4 Clean tools and equipment after use 1.5 Store tools, materials and personal protective equipment properly

Learning outcomes	Assessment criteria
<p>2 Be able to assist with controlling unwanted plants</p>	<p>2.1 Collect the necessary tools, equipment and personal protective equipment ready for the job</p> <p>2.2 Use the correct methods to control unwanted plants as instructed</p> <p>2.3 Report any problems to the correct person as soon as possible</p> <p>2.4 Clean and store tools and equipment properly after use</p>
<p>3 Be able to work safely</p>	<p>3.1 Use the tools, materials and personal protective equipment safely and correctly</p> <p>3.2 Maintain the health and safety of self and others at all times</p> <p>3.3 Maintain hygiene according to instructions</p> <p>3.4 Leave the work area in a safe and suitable condition</p> <p>3.5 Dispose of waste safely and correctly according to instructions</p>

Unit content

1 Be able to assist with maintaining the health of plants

Tools, equipment and PPE: types and uses of eg spade, fork, Dutch hoe, draw hoe, secateurs, loppers, wheelbarrow, pruning saw, gardening gloves and steel toecap boots; methods used to clean and store correctly after use

Maintain the health of plants: methods used to prune, train, water and mulch plants correctly; checking plants for pests, diseases and disorders; notify person in charge; correct identification of problem to be verified

2 Be able to assist with controlling unwanted plants

Tools, equipment and PPE: correct selection of Dutch hoe, draw hoe, fork and wheelbarrow, gardening gloves and steel toecap boots; methods used to clean and store correctly after use

Correct methods for control: eg dig up perennial weeds, hoe off annual weeds and remove from site

Report problems: notify person in charge of any problems found before, during or after task; correct identification of problem to be verified

3 Be able to work safely

Work safely: fill out risk assessment forms; reasons for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

Hygiene: clean and sterilise tools when changing between plants or after working on infected material

Tidy up and dispose of waste: no tools or equipment left on site once task is completed, all waste picked up and disposed of in either organic or inorganic facilities

Essential guidance for tutors

Delivery

This unit is intended to give learners experience of the plant maintenance skills needed to keep plants growing to their full potential, together with the background knowledge required to underpin these practical skills. Learners must have opportunities to develop their knowledge and practical maintenance skills through use of supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

This unit has been designed to provide the knowledge and skills needed to maintain planted areas outdoors or in protected cropping environments. Emphasis must be placed on safe and effective working practices in all practical tasks being undertaken. The use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help learners improve their social and problem-solving skills.

The use of all tools listed in the *Unit content* should be encouraged, although a Dutch hoe and a draw hoe provide similar results if only one is available. Other tools can be used or substituted depending on the plants being maintained.

Correct spacing of plants is mentioned within the unit, but it is recognised that some plants are placed and planted as individual specimens, so height and spread can be discussed but actual spacing may not be relevant. The situation must be clearly evidenced within the assessment.

Tutors should demonstrate the various techniques and skills needed to maintain an established border and learners must practise all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with pruning various plant material and mulching a variety planting.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Be able to assist with maintaining the health of plants</p> <p>Learners shown the tools and equipment. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners work individually on tool and equipment identification sheets. Videos or presentations can be shown on relevant health and safety. Learners to fill out risk assessment sheets individually. Learners to put away, clean and store tools after practical sessions. Tutor-led discussion on why this is an important part of the job.</p> <p>Tutors could verbally explain and demonstrate correct practice across a variety of plant material. This could be followed by learners practising. Tutors should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p> <p>Learners can produce a poster or PowerPoint presentation, either as individuals or in small groups, showing a variety of organic and inorganic mulches and highlighting the advantages and limitations of each one.</p> <p>Learners should be encouraged to identify and report problems and to think of ways to remedy problems found. This can be done through a tutor-led discussion with the whole group.</p>

Topic and suggested assignments/activities
<p>Be able to assist with maintaining the health of plants</p> <p><i>Assessment:</i> to ensure all assessment criteria for this part are met it is advised that the tutor devises an assessment sheet that covers health and safety, correct selection and use of tools, correct pruning, training, watering and mulching methods for the given practical, a box for recording any reported problems and correct storage of tools.</p> <p>Due to the need for a large number of different tasks, the assessment could be split into two sessions of one hour each, one focusing on pruning and training and the other focusing on watering and mulching.</p> <p>A completed individual risk assessment can be attached to this, along with any witness statements that could back up the assessment.</p> <p>If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.</p>
<p>Be able to assist with controlling unwanted plants</p> <p>Tutors could explain why weeding is important in established beds and borders. Learners could research and list perennial and annual weeds that are commonly found in gardens and protected environments. A demonstration on the use of a Dutch hoe and a draw hoe could be shown, also the method for removing perennial weeds. This could be followed by learners practising.</p> <p>Learners should be encouraged to identify and report problems and to think of ways to remedy problems found. This can be through a tutor-led discussion with the whole group.</p>
<p>Be able to assist with controlling unwanted plants</p> <p><i>Assessment:</i> to ensure all assessment criteria for this part are met it is advised that the tutor devises an assessment sheet that covers health and safety, correct selection and use of tools, correct weeding method for the given practical, a box for recording any reported problems and correct storage of tools.</p> <p>A completed individual risk assessment can be attached to this, along with any witness statements that could back up the assessment.</p> <p>If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.</p>
<p>Be able to work safely</p> <p>Learners can produce posters or PowerPoint presentations, in groups or as individuals, showing the health and safety and PPE required for the maintenance operations. Tutors to assist with highlighting dangers and making learners aware during practicals. Learners should be encouraged to alert each other to safety issues and find appropriate solutions.</p> <p>Learners can be asked to list, in small groups, where they think inorganic and organic waste should be disposed of after the task has been completed.</p>
<p>Be able to work safely</p> <p>There is no need to assess this part separately and assessment should be integrated into the maintenance operations.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Many criteria will need to be assessed directly by the tutor during practical maintenance activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. If using video evidence, the permission of parents/guardians should be obtained before carrying out the assessment. Videos must show clearly all the activities required to achieve the criteria, and feedback must be delivered promptly. However, some of the criteria may be assessed through the correct completion of forms or paperwork. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must select one correct tool or piece of equipment required for each specific operation: pruning, training, mulching and watering.

To achieve 1.2, learners must show the ability to maintain plants correctly by pruning, training, mulching and watering according to instructions. This may be evidenced by an appropriate assessment sheet signed by the tutor.

To achieve 1.3, learners must check the condition of plants and report any problems encountered. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 1.4, learners must clean at least two tools or pieces of equipment that they have used.

To achieve 1.5, learners must correctly store one tool, one material and one piece of PPE that they have used.

To achieve 2.1, learners must select the correct tools, equipment and PPE for controlling unwanted plants. This may be evidenced by a witness statement or on an appropriate assessment sheet and signed by the tutor.

To achieve 2.2, learners must carry out at least two methods of weed control. This may be evidenced by a witness statement or added to the assessment sheet.

To achieve 2.3, learners must report any problems to the correct person. This may be evidenced by a witness statement or added to the assessment sheet and signed by the tutor.

To achieve 2.4, learners must clean and correctly store at least two tools or pieces of equipment that they have used.

To achieve 3.1, learners must use tools, materials and PPE correctly according to instructions.

To achieve 3.2, learners must complete an individual risk assessment for one task. They must also show and maintain an awareness of health and safety when working on set tasks.

To achieve 3.3, learners must wipe clean tools and equipment when moving between different planting areas, and also pick up plant material for disposal. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.4, learners must demonstrate that they can maintain a tidy and safe working environment. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.5, learners must dispose of two types of waste safely in the correct areas. This may be evidenced by a witness statement signed by the tutor.

Essential resources

The minimum requirement needed to deliver this unit is an area of established planting or indoor crops. It should contain a range of shrubs, herbaceous perennials, bulbs and annual bedding. Each learner should have access to enough plant material so they can practise adequately to achieve the assessment standards. An area for storing and cleaning tools is needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local gardens or a large commercial nursery. A talk by the head gardener or grower explaining the importance of good plant and garden maintenance would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry.

Indicative resource materials

Textbooks

There are no specific textbooks about plant maintenance aimed at Level 1 learners. The textbooks listed refer to the subject and contain relevant picture guides.

Brickell C – *RHS Encyclopedia of Gardening* (Dorling Kindersley, 2007)
ISBN 9781405322270

Brickell C and Joyce D – *RHS Pruning and Training* (Dorling Kindersley, 2006)
ISBN 9781405315265

Hessayon Dr D G – *The Pest and Weed Expert* (Expert Books, 2007) ISBN 9780903505628

Ryrie C – *Soil* (Gaia Books Ltd, 2001) ISBN 9781856751223

Ryrie C – *Weeds* (Gaia Books Ltd, 2001) ISBN 9781856751322

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 29: Assist with the Vegetative Propagation of Plants

Unit code:	M/502/4121
QCF Level:	1
Credit value:	3

Unit aim

This unit will enable learners to assist with the vegetative propagation of plants by division and cuttings, including the collection of propagation materials and establishment in a suitable environment. It may be carried out outdoors or in protected environments and will comply with all health and safety requirements.

Unit introduction

This unit introduces learners to the practical skills needed to propagate plant material using vegetative methods and the establishment of material in the suitable environment. This can take place in outdoor or protected propagation situations and can cover division, layering, hardwood cuttings, softwood cuttings, grafting, root cuttings, bulb division/scaling and air layering.

Learners will have the opportunity to practise using some or all of the propagation methods within an acceptable timescale. It is recognised that some of the methods mentioned above are season-dependent and learners may not have the time to practise them all.

Emphasis is placed on safe working practices when undertaking collection, preparation and establishment tasks.

Although learners will work independently on most tasks, there are also opportunities to work as effective team members by contributing to the collection and preparation of the material, and also by keeping the working area safe and tidy. This unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with collecting propagation material for the vegetative propagation of plants	1.1 Use and maintain equipment in a safe, clean and effective condition 1.2 Correctly identify plants from which material is to be collected 1.3 Handle plant material in a manner which minimises damage and wastage 1.4 Use methods for collecting propagation material in accordance with instructions 1.5 Ensure the collected material meets the requirements of the propagating programme as instructed 1.6 Store collected material in accordance with instructions
2 Be able to assist with preparing propagation materials	2.1 Prepare and maintain equipment in a fit state for use 2.2 Handle plant material in a manner which minimises damage and wastage 2.3 Use equipment in a safe and correct manner 2.4 Prepare and treat propagation materials in accordance with instructions; including division and cuttings
3 Be able to assist with establishing propagation materials in a growing environment	3.1 Prepare and maintain the necessary materials in a fit state for use 3.2 Prepare the rooting medium in accordance with instructions 3.3 Handle plant material in a manner which minimises damage and wastage and optimises growth 3.4 Position propagation material in the rooting medium in accordance with instructions 3.5 Place propagation material in an appropriate growing environment as instructed 3.6 Complete activities to sustain and promote plant development after propagation in accordance with instructions

Learning outcomes	Assessment criteria
4 Be able to work safely	4.1 Ensure that working methods promote health and safety and are consistent with relevant legislation and codes of practice 4.2 Dispose of waste safely and in accordance with instructions and legal requirements

Unit content

1 **Be able to assist with collecting propagation material for the vegetative propagation of plants**

Equipment: types and use of eg secateurs, grafting knife, snips, fork and spade; methods used to clean and sharpen before and after use

Identification of plant material: reasons why plants should be identified as vigorous, healthy and free from pests and diseases; methods of recognising plant material as herbaceous perennial, bulbous, tree or shrub; how this helps to identify an appropriate propagation method

Collecting propagation material: methods eg lift from planting situation, cut, propagate on site; correct materials to be collected eg correct age, size, thickness and variety

Handling and storage: reasons why plants are bagged, bundled into variety order and kept from drying out or freezing; use of co-extruded bags to reduce water loss; reasons to store in a cool, dark place until required

2 **Be able to assist with preparing propagation materials**

Equipment: selection and maintenance of eg secateurs, grafting knife, snips; methods used to sterilise, sharpen, oil and clean before, during and after use

Preparing propagation materials: methods of preparing a variety of plant material eg division, cuttings; reasons for using rooting hormones and nutrients; reasons for keeping varieties separate; reasons for keeping material out of direct sunlight and only preparing what can be planted within a specified timeframe

Safety: risk assessment forms; reasons for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

3 **Be able to assist with establishing propagation materials in a growing environment**

Materials: types of seed trays and pots eg modular trays, traditional seed trays, 9 cm pots, root trainers; reasons to check for damage and cleanliness and keep stored out of direct sunlight; types of rooting medium eg compost, sand, garden soil; methods of preparation eg mixing, digging, raking, ensuring adequate moisture

Establishing propagation materials: reasons why plants must be handled carefully and the negative effects on growth if mistreated; methods of handling plants; methods of positioning plant material eg correct orientation, depth, density

Growing environment: reasons why correct environment must be selected; types of environment eg heated sand bed, cold frame, sun frame, misting unit, Garner bin; activities to promote growth eg methods of controlling light, moisture, humidity and heat

4 Be able to work safely

Health and safety: risk assessment forms; reasons for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

Waste disposal: reasons for leaving the propagation area free from plant debris; correct places for disposing of organic and inorganic waste products

Essential guidance for tutors

Delivery

This unit is intended as an introduction to the requirements, including health and safety, for propagation and establishment operations, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and practical propagation and establishment skills through use of supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

In order to cover all major propagation methods, delivery will need to be phased over the course of a growing season to ensure learners are shown, and understand, the correct times for all the methods being taught.

The use of all tools, PPE and equipment listed in the *Unit content* should be encouraged, although other tools and equipment can be used or substituted depending on the planting area.

Tutors should demonstrate the various techniques and skills needed to vegetatively propagate correctly and provide immediate aftercare. Learners must practise all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with collecting, preparing, planting and establishing.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Be able to assist with collecting propagation material for the vegetative propagation of plants</p> <p><i>Equipment:</i> learners shown the tools and equipment. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners work individually on tool and equipment identification sheets. Tutor to demonstrate sharpening techniques for learners to practise.</p> <p><i>Identification of plant material:</i> learners could be shown how to look for and identify correct material suitable for vegetative propagation. Emphasis should be put on selecting healthy vigorous stock. Tutor-led discussion on how this affects the rooted new plant. Learners may want to devise an easy-to-use key that helps them identify herbaceous perennials, trees, shrubs and bulbs.</p> <p><i>Handle plant material correctly:</i> tutor-led discussion on why it is important to keep varieties separate or labelled correctly. Tutor-led discussion on why it is important not to leave cut material in the sun or extreme temperatures.</p> <p><i>Methods for collection:</i> tutor could demonstrate how to collect or select material for specific propagation tasks. Tutor-led discussion while undertaking the demonstration.</p>

Topic and suggested assignments/activities
<p><i>Correct materials collected:</i> the tutor could verbally explain and demonstrate correct collection practice across a variety of plant material. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate. Learners label material correctly with variety, type of plant and time collected.</p> <p><i>Store correctly:</i> tutor-led discussion on why using a co-extruded bag is the best way of storing propagation material.</p>
<p>Be able to assist with collecting propagation material for the vegetative propagation of plants</p> <p><i>Assessment:</i> each time a collection task is completed, learners could fill out a diary sheet, appropriate gapped handout or question sheet that shows the tools and equipment used, the name and type of plant collected, size, thickness of material, a brief description of the collection method and how it was handled and stored.</p>
<p>Be able to assist with preparing propagation materials</p> <p><i>Prepare and maintain equipment:</i> the tutor could demonstrate how to use and maintain each piece of equipment. Tutor-led discussion on why it is important to have sharp and clean tools when preparing propagation material.</p> <p><i>Handle plant material correctly:</i> tutor-led recap questions, as this should have been covered when collection took place. Emphasis to be placed on only preparing what can be planted in a given period of time.</p> <p><i>Safe and correct use:</i> complete risk assessment forms.</p> <p><i>Prepare and treat material:</i> the tutor could verbally explain and demonstrate correct practice across a variety of plant material. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p>
<p>Be able to assist with preparing propagation materials</p> <p><i>Assessment:</i> each time a preparation task is completed, learners could fill out a diary sheet, appropriate gapped handout or question sheet that shows the equipment used, how it was maintained, the name and type of plant maintained, type of propagation undertaken, preparation method of the material and how it was handled and stored.</p>
<p>Be able to assist with establishing propagation materials in a growing environment</p> <p><i>Prepare and maintain materials:</i> tutor-led discussion on the correct tray for the propagation method.</p> <p><i>Prepare rooting medium:</i> the tutor could verbally explain and demonstrate correct practice across a variety of rooting media. This could be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p> <p><i>Handle plant material correctly:</i> tutor-led discussion about what may happen to propagation material if it is mishandled.</p> <p><i>Position plant material:</i> the tutor could verbally explain and demonstrate correct practice across a variety of plant material. This should be followed by learners practising. The tutor should monitor learners as they develop new skills and provide guidance, correction and praise, as appropriate.</p>

Topic and suggested assignments/activities
<p><i>Place in correct environment:</i> tutor-led discussion on how each growing environment affects the rooting and establishment of the propagation material. Learners could list the uses and benefits of each environment.</p> <p><i>Activities promoting growth:</i> learners practise with tutor help, adjusting and maintaining growing environments. Emphasis must be placed on checking and maintaining correct light, moisture, humidity and heat.</p>
<p>Be able to assist with establishing propagation materials in a growing environment</p> <p><i>Assessment:</i> each time a preparation task is completed, learners could fill out a diary sheet, appropriate gapped handout or question sheet that shows the equipment used, how it was maintained, the type of tray used and density of planting, the growing environment used, activities undertaken to promote growth and how any waste was disposed of.</p>
<p>Be able to work safely</p> <p>Learners can produce posters or PowerPoint presentations, in groups or as individuals, showing the health and safety and PPE required for the planting and establishment operations. Tutors to assist with highlighting dangers and making learners aware while on practicals. Learners should be encouraged to alert each other to safety issues and to find appropriate solutions.</p> <p>Tutor-led discussion on how to dispose of waste correctly.</p>
<p>Be able to work safely</p> <p><i>Assessment:</i> there is no need to assess this part separately and assessment should be integrated into the propagation and establishment operations.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being carried out that match the assessment criteria.

Some criteria will need to be assessed directly by the tutor during propagation and establishment operations. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Most of the criteria may be assessed through the correct completion of forms. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must safely use and maintain at least two pieces of equipment related to the task. This can be evidenced by a witness statement signed by the tutor.

To achieve 1.2, learners must demonstrate the ability to correctly identify healthy plant material suitable for propagation from one tree, shrub, herbaceous perennial and bulb.

To achieve 1.3, learners must handle propagation material and stock plants correctly.

To achieve 1.4, learners must collect propagation material in accordance with instructions.

To achieve 1.5, learners must identify the correct size, age and/or thickness of propagation material, and ensure that it is the correct plant for the propagation programme. This may be evidenced by a witness statement signed by the tutor.

To achieve 1.6, learners must correctly follow storage instructions for one of the collected propagation materials.

To achieve 2.1, learners must prepare at least two tools or pieces of equipment relevant to the propagation task.

To achieve 2.2, learners must demonstrate the ability to handle propagation materials correctly.

To achieve 2.3, learners must complete a risk assessment relevant to at least one propagation method.

To achieve 2.4, learners must demonstrate the ability to prepare material correctly for division and cuttings. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.1, learners must prepare and maintain at least two pieces of material relevant to the task.

To achieve 3.2, learners must demonstrate the ability to prepare the rooting medium correctly according to instructions. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.3, learners must handle each of the collected materials as instructed in order to minimise damage and waste and optimise growth.

To achieve 3.4, learners must demonstrate the ability to plant the propagation material correctly in accordance with instructions. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.5, learners must place the propagated material in the correct growing conditions in accordance with instructions. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.6, learners must water the propagated material correctly and assist with maintaining the correct light and humidity.

To achieve 4.1, learners must complete a risk assessment relevant to at least one propagation method.

To achieve 4.2, learners must dispose of any waste safely and correctly. This may be evidenced by a witness statement signed by the tutor.

Essential resources

The minimum requirements needed to deliver this unit are an indoor and an outdoor area where vegetative propagation can take place. The indoor and outdoor areas should have different propagation environments in which learners can practise their skills. Each learner should have access to enough plant material so they can practise adequately to achieve the assessment standards. An area for cleaning, sharpening and storing tools and equipment is also needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local nurseries and growers. A talk by the greenhouse or crop supervisor explaining the importance of good propagation methods would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry.

Indicative resource materials

Textbooks

There are no specific textbooks about vegetative propagation aimed at Level 1 learners. The textbooks listed refer to the subject and contain relevant picture guides.

Cushnie J – *How to Propagate* (Kyle Cathie, 2006) ISBN 9781856266123

Hessayon Dr D G – *The Garden Expert* (Pan Britannica, 1986) ISBN 9780903505222

RHS Practicals – *Hardy Perennials* (Dorling Kindersley, 2002) ISBN 9780751347203

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 30: Assist with the Propagation of Plants from Seed

Unit code: D/502/4017

QCF Level: 1

Credit value: 2

Unit aim

The learner will be able to assist with the seed propagation of plants, by hand or machine and establishment in suitable environments. Activities may be carried out outdoors or in protected environments and must comply with health and safety requirements.

Unit introduction

This unit introduces learners to the principles and processes of sowing seeds. It also introduces them to the tools, equipment, materials and environment needed to ensure successful germination.

Learners will be given the opportunity to select appropriate outdoor sites or containers for sowing a range of different seeds. They will also have the opportunity to practise preparing a suitable medium, sowing seeds at different depths and spacing, watering and labelling newly sown seeds in an outdoor site and placing seed containers in suitable germination environments. Learners will be encouraged to observe the effects of different techniques and environments.

Learners will work independently on some tasks and in teams for others, as appropriate.

There will be an emphasis on health and safety and on keeping the work area clean and tidy.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with preparing to propagate plants from seed	1.1 Use and maintain equipment in a safe and effective condition throughout 1.2 Prepare the growing medium in accordance with instructions 1.3 Handle seeds in a way which minimises damage

Learning outcomes	Assessment criteria
2 Sow seed under supervision	2.1 Prepare and maintain the necessary equipment and materials for the work being undertaken 2.2 Use equipment and materials in a safe and correct manner 2.3 Sow seed evenly and in accordance with instructions 2.4 Provide aftercare in accordance with instructions
3 Be able to work safely	3.1 Dispose of waste safely and in accordance with instructions and legal requirements 3.2 Work in a manner that promotes health and safety and is consistent with relevant legislation and codes of practice

Unit content

1 **Be able to assist with preparing to propagate plants from seed**

Preparing to propagate: different types of growing media eg peat-based seed sowing mix, John Innes No 1, home prepared mix (eg from sterilised home compost, leaf mould, bark), peat reduced mix (including alternatives eg composted green waste); methods used to prepare open ground soils and growing media; different seeds and sowing instructions; preparation of seed trays, modules, pots, presser boards and strikers, sieves, labels, marker pens, watering can or hose, lines, gloves; disposal of waste; safe working practices

2 **Sow seed under supervision**

Sow seed: use and collection of seeds; preparation of an open ground site; preparation of containers and media; depth, spacing; labelling; watering; correct germination environment; hygiene; immediate aftercare; health and safety; risk assessment

3 **Be able to work safely**

Work safely: reasons for and methods of keeping work area free of potential hazards, methods of disposing of waste (plastic, paper, growing medium), simple risk assessment forms, current relevant legislation, PPE

Essential guidance for tutors

Delivery

This unit is intended to give learners experience of using seed sowing skills needed to ensure that plants germinate into viable propagules, together with the basic background knowledge required to underpin these practical skills. Learners must have opportunities to develop practical skills and knowledge through the use of supervised classroom, glasshouse and outdoor activities and demonstrations of the equipment and techniques involved.

Recommended seeds that germinate easily and should be rewarding for learners to grow include Tagetes (French marigold), Nasturtium, Nemesis, Papaver (poppy), Lathyrus (sweet pea), Helianthus (sunflower), tomato and bean.

Emphasis should be placed on safe and effective working practices for all practical tasks being undertaken. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help learners improve their social and problem-solving skills.

The use of all tools and equipment listed in the *Unit content* should be encouraged. Tutors should demonstrate the knowledge, skills and techniques associated with seed sowing and learners must practise all these techniques.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Assist with preparing to propagate plants from seed</p> <p>Learners shown the tools and equipment. Tutor-led discussion on uses and safety of all relevant tools and equipment. Learners work individually on tool and equipment identification sheets. Learners could practise preparing outdoor sites and growing media for containers, and discuss tilth, level and consolidation.</p>
<p>Assist with preparing to propagate plants from seed</p> <p>Identification exercise using tools and equipment which are laid out and numbered.</p> <p>Practical test on preparing soils and other growing media, evidenced by practical record sheet.</p> <p>Practical test on preparing seeds for sowing, evidenced by practical record sheet.</p>
<p>Sow seed under supervision</p> <p>Learners could prepare all tools and equipment required for the seed sowing operation. Learners practise sowing seed in an outdoor site. Learners prepare growing medium and practise sowing seeds in containers and providing immediate aftercare.</p>
<p>Be able to sow seeds under supervision</p> <p><i>Assessment:</i> Observation of practical work, evidenced by a practical marking sheet.</p>

Topic and suggested assignments/activities
<p>Be able to work safely</p> <p>Learners can contribute to a simple group risk assessment or fill out an individual risk assessment. Learners must keep work area tidy and clean and store all tools and equipment after use. Tutor-led discussion on the importance of health and safety legislation.</p>
<p>Be able to work safely</p> <p><i>Assessment:</i> Health and safety assessment will be integrated into the assessment of practical work and evidenced on a practical marking sheet. Learners should also complete a simple risk assessment in writing or verbally.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Many criteria will need to be assessed directly by the tutor during practical activities. This should be evidenced by observation records and/or witness testimonies. If using video evidence, the permission of parents/guardians should be obtained before carrying out the assessment. The video must clearly show all the activities required to achieve the criteria and feedback must be delivered promptly. Some criteria may be assessed through the correct completion of forms, identification sheets etc. Where this is the case, it should be signed and dated by the tutor.

There is no time limit to assessment but it is assumed that assessment of individual tasks should take about one hour.

To achieve 1.1, learners must use the correct tools and equipment for at least one method of sowing seeds, for example seed trays, modules, open ground. Learners must use the tools and equipment safely and clean and store them after use.

To achieve 1.2, learners must prepare the growing media (soils or other media) following instructions.

To achieve 1.3, learners must handle at least one type of seed without damaging the seeds.

To achieve 2.1, learners must prepare tools and equipment for seed sowing and maintain the tools and equipment.

To achieve 2.2, learners must use equipment and materials safely and correctly throughout practical tasks.

To achieve 2.3, learners must sow seed evenly in drills on an open ground site and must sow at least one type of seed in a container for germination in a protected environment.

To achieve 2.4, learners must ensure that the seeds have sufficient light, water and heat for germination and establishment, according to their type.

To achieve 3.1, learners must follow instructions to dispose of at least one type of waste in accordance with legal requirements.

To achieve 3.2, learners must work safely and in accordance with health and safety legislation throughout all practical work.

Essential resources

The minimum requirement to deliver this unit would be a workbench, a suitable area to place the seeds to enable germination, growing media, water, seeds, suitable containers (such as seed trays, plant pots, modules), labels and pen. An area of open ground for seed sowing is essential. An area for storing and cleaning equipment is also required.

Employer engagement and vocational contexts

Part of the knowledge for the learners to complete this unit could be developed by visiting local nurseries. A talk by the grower explaining the principles of seed sowing would put the unit in its vocational context. This could also alert learners to the opportunities for future employment in commercial horticulture.

Indicative resource materials

Textbooks

Burnie D – *Eyewitness: Plant* (Dorling Kindersley, 2003) ISBN 9780751364835

Dawson P – *A Handbook for Horticultural Students* (Dawson, 2006) ISBN 9780952591115

Toogood A (editor) – *Royal Horticultural Society: Propagating Plants* (Dorling Kindersley, 2006) ISBN 9781405315258

Websites

www.kew.org/msbp/what/knowledge/germination.htm

www.rhs.org.uk/Learning/Publications

<http://theseedsite.co.uk>

Unit 31: Assist with Identifying the Presence of, and Controlling Common Pests and Diseases

Unit code: M/502/4023

QCF Level: 1

Credit value: 2

Unit aim

Completion of this unit will enable the learner to assist with identifying and controlling pests and diseases in intensive cropping situations. It may be carried out outdoors or in protected environments.

Unit introduction

This unit introduces learners to common pests and diseases found outdoors and within protected environments, and also to the techniques used to identify and control the problems found.

Emphasis is placed on safe working practices when undertaking identification and control.

Learners will be given the opportunity to practise identifying and controlling pests, diseases and disorders within an acceptable timescale.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members by contributing to the maintenance of a crop and to keeping the working area safe and tidy. This unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

It should be noted that learners must not be expected to undertake any chemical application that requires the person to hold a chemical application licence.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with identifying the presence of common pests and diseases	1.1 Observe the crop/plants in accordance with instructions 1.2 Report the presence and extent of common pests and diseases
2 Be able to assist with controlling common pests and diseases	2.1 Carry out cultural or biological control methods in accordance with instructions 2.2 Perform work in a manner which minimises environmental damage 2.3 Report problems arising during pest and disease control 2.4 Dispose of waste safely in accordance with instructions and relevant legal requirements
3 Be able to work safely	3.1 Maintain health and safety of self and others

Unit content

1 Be able to assist with identifying the presence of common pests and diseases

Identify: common pests eg greenfly, slugs, scale insects; common diseases eg powdery mildew, potato and tomato blight, rust; crop monitoring through regular crop walks; checking of traps; inspection of pests with eye glass to enable correct identification; reporting identified pests or diseases, location within the cropping situation

2 Be able to assist with controlling common pests and diseases

Control methods: eg contact, selective, residual and systemic chemical applications; selection of correct method of control, in accordance with the integrated pest management programme (IPM); correct dosage of any method applied; choosing the method which is considered most effective with the least potential hazard to the local ecosystem

Reporting problems: eg plants wilting, larger areas of damage than first noticed; incorrect identification of main problem within the crop

Disposal of waste: appropriate disposal according to instructions on packet eg compost, green bin, inorganic rubbish bin; requirement to wash out some plant protection containers before disposal

3 Be able to work safely

Health and safety: risk assessment; reasons for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

Essential guidance for tutors

Delivery

This unit is intended to give learners experience of pest and disease management within an intensive cropping situation, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and practical identification skills through use of supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

It is recognised that, depending on the growing techniques, cropping situation and area within the country, certain pests and diseases may be more prevalent than others. Individual tutors can decide the two most common pests and two most common diseases that will need to be studied.

The unit has been designed to provide the introductory knowledge and skills needed to identify and control pests and diseases in a diverse range of intensive cropping situations. Emphasis must be placed on safe and effective working practices in all practical tasks being undertaken. Before undertaking any control methods the environmental effects must be considered and discussed. The use of sprayers and commercial strength chemicals are not needed to complete this unit. It is designed for learners to improve their attention to detail, identification and communication skills.

Use of an eye glass, as mentioned in the *Unit content*, should be encouraged to aid in identification of certain pests.

Tutors should demonstrate the various techniques and skills needed to identify and control pests and diseases and learners must practice all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with keeping a crop at an optimum saleable standard. Tutors are also advised to explain and show the difference between diseases and disorders such as wilting, sunburn, wind scorch and frost damage.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Be able to assist with identifying the presence of common pests and diseases</p> <p>Class or tutor-led discussion on why it is important to monitor a crop closely; this should be related back to profit and loss within a business.</p> <p>Learners could put up sticky traps to enable the monitoring of pest build-up in specific areas of the crop.</p> <p>Learners could research and produce factsheets or PowerPoint presentations on the most common pests and diseases found in intensive cropping situations. This can be done as individuals or in groups.</p> <p>Learners, as a group, could devise a useable crop monitoring programme and have it agreed by the crop supervisor; this could then be used for assessment.</p> <p>Each time learners monitor the crop, the findings should be given to the crop supervisor so that appropriate actions for control can be considered.</p>

Topic and suggested assignments/activities**Be able to assist with identifying the presence of common pests and diseases**

Assessment: A crop monitoring sheet could be used which allows learners to complete details of the area where the pest or disease has been spotted, the damage caused and the number of new pests caught on their sticky trap. To achieve the assessment criteria, this should be completed at least three times over a three-week period to show effective monitoring and identification has taken place.

Each sheet should be checked and signed off by the crop supervisor as evidence that reporting has taken place.

Be able to assist with controlling common pests and diseases

Learners must know the differences between chemical, biological and cultural controls. This can be carried out as group research and presented in poster or PowerPoint form.

Learners must be able select a control method for the problems identified, using their knowledge of the taught control methods. This must be agreed with the crop supervisor in accordance with the IPM system.

Learners should be shown the technical information sheets supplied with the control chosen and apply the method in accordance to the instructions.

Learners can devise a useable worksheet that shows the control used, the method of application and amount used. The sheet should also show any other problems encountered while the control is being used on the crop.

Tutor-led discussion on environmental effects of chemical and biological controls, and also on the best ways of disposing of waste products such as packaging.

Be able to assist with controlling common pests and diseases

Assessment: Using the worksheet agreed by the crop supervisor, learners can complete the worksheet when control methods are being implemented.

The worksheet must show the area where control is being used, the control used, the amount used, any problems encountered and how excess waste was disposed of.

To achieve the assessment criteria, this should be completed three times over a three-week period.

Each sheet should be checked and signed off by the crop supervisor as evidence that control has taken place.

Be able to work safely

Learners complete a risk assessment for controlling pests and diseases. Working in groups learners can produce a poster or PowerPoint on the health and safety implications of dealing with chemical and biological control.

Learners to be made aware of the need to label areas where control has taken place.

Learners as a group can devise a useable labelling system.

A tutor-led discussion on why these procedures are important.

Topic and suggested assignments/activities
<p>Be able to work safely</p> <p><i>Assessment:</i> Completion of appropriate risk assessment before undertaking control tasks.</p> <p>Erection of signs within crop, showing date and control method used. This can be evidenced by photographs of the site or by photocopying the sign and countersigning the information.</p> <p>A back-up witness statement from the crop supervisor can also be added if needed.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being carried out that match the assessment criteria.

Some criteria will need to be assessed directly by the tutor during pest and disease control activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. However, most of the criteria may be assessed through the correct completion of forms or paperwork. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must complete at least three crop walks in the same area and note down what they find.

To achieve 1.2, learners must report their findings for each walk to the crop manager and have this confirmed and signed off.

To achieve 2.1, learners must carry out at least two different methods of control. These may be biological or cultural.

To achieve 2.2, learners must be able to work in a manner that minimises damage to the crop and local ecosystems. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.3, learners must be able to report problems encountered effectively when carrying out control. This may be evidenced by the completion of a report sheet which must be signed by the tutor or crop manager.

To achieve 2.4, learners must dispose of the waste in the correct manner. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.1, learners must be able to complete an individual risk assessment relating to one method of control, which must be signed by the tutor. Learners must also be able to work safely according to instructions. This can be evidenced by a witness statement signed by the tutor.

Essential resources

The minimum requirement needed to deliver this unit is an area of outdoor growing space or greenhouse cropping. Cropping can be considered as anything being grown for sale to the public or commercial customers.

For the identification of certain pests eye glasses are an important tool, as some pests can be identified incorrectly by the naked eye. Sticky traps are a simple and effective way of monitoring pest build-up in protected cropping situations. Learners should gain experience of using both of these methods.

Each learner should have access to enough planted crop material to enable adequate practice to achieve assessment standards.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local nurseries and growers. A talk by the greenhouse or crop supervisor explaining the importance of good pest and disease management would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry. Inviting biological control experts to come in and assist learners with selecting and applying biological control methods may engage learners with local suppliers of products needed within the industry.

Indicative resource materials

Textbooks

There are no specific textbooks about pests and diseases aimed at Level 1 learners. The textbooks listed refer to the subject and contain relevant picture guides.

Bradley S – *What's Wrong with my Plant?* (Hamlyn, 2007) ISBN 9780600614661

Greenwood P, Halstead A – *RHS Pests and Diseases* (Dorling Kindersley, 2009)
ISBN 9781405341776

Hessayon Dr. D G – *The Pest and Weed Expert* (Expert Books, 2007) ISBN 9780903505628

Journal

Organic Garden and Home – www.organicgardeningmagazine.co.uk

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 32: Prepare and Plant a Container for Display

Unit code: D/600/0293

QCF Level: 1

Credit value: 3

Unit aim

This unit includes the knowledge, skills and understanding needed to prepare and select the plants to create a display, and plant a container.

Unit introduction

This unit introduces learners to the principles and processes of planting containers. It also introduces them to suitable planting media, tools, equipment and materials needed to ensure successful plant displays in containers. Learners will also have the opportunity to review a range of plants and select up to four that are suitable for the container and the location.

Learners will be given the opportunity to select appropriate containers for planting a range of different plants. They will also be able to practise preparing a container, selecting a suitable planting medium, planting at the correct depth and spacing, and watering. Learners will be encouraged to observe the effects of different displays and techniques.

Learners will work independently on some tasks and in teams for others, as appropriate.

There will be an emphasis on health and safety and keeping the work area clean and tidy.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to prepare to plant a container	1.1 Select and wear appropriate protective clothing 1.2 Follow safety procedures as instructed to ensure the health and safety of self and others 1.3 Select and organise tools, materials and equipment before use

Learning outcomes	Assessment criteria
2 Be able to prepare a container for planting	2.1 Position a container for planting 2.2 Select and place lining or drainage materials as necessary 2.3 Select suitable compost, fertiliser and/or other additives, add required quantities and consolidate to suit planting needs
3 Understand how to select suitable plants for the display	3.1 Identify and name four different plants from a selection that would be suitable for the display and its location 3.2 Choose at least two of these for the display and state the characteristics and needs of each 3.3 State how the chosen plants will be used to create a pleasing display 3.4 State how to check that the plants are fit to use
4 Be able to plant a container	4.1 Position plants suitably and at correct depth in the container, add compost and consolidate as appropriate 4.2 Water plants without undue disturbance or waste 4.3 Demonstrate careful handling of plants throughout
5 Be able to clear up after planting a container	5.1 Clean and store tools and equipment after use 5.2 Clear and tidy the work area after use disposing of debris appropriately

Unit content

1 Be able to prepare to plant a container

Prepare to plant: protective equipment eg gloves, work boots; safety procedures eg safe lifting techniques, risk assessment; tools, materials and equipment eg containers, compost, fertilizers, water retaining gels, mulch material, moss or other lining material, hand fork and trowel, watering can or hose and attachments

2 Be able to prepare a container for planting

Prepare a container for planting: position of container eg suitable site, brackets and chains for hanging baskets; lining or drainage materials eg moss or alternatives for baskets, polythene, gravel; composts and additives eg appropriate compost, granular or controlled release fertilizer, water retaining gels; consolidation of compost to suit container, plants and purpose

3 Understand how to select suitable plants for the display

Select suitable plants: names and characteristics of plants eg half hardy annuals, winter bedding, herbaceous perennials, small trees and shrubs; suitability for container and location; requirements eg sun, shade, water, winter/summer treatment; design principles eg size, height, colour, foliage, compatibility; health of plants eg free from pests and diseases, healthy root system, trimmed foliage, vigour

4 Be able to plant a container

Plant a container: methods of handling plants carefully to avoid damage; correct depth and spacing; suitable consolidation of compost; plants watered in sufficiently without waste

5 Be able to clear up after planting a container

Clear up after planting: reason for and methods of keeping the work area tidy; waste disposal according to instructions; correct cleaning and storage of tools and equipment

Essential guidance for tutors

Delivery

This unit is intended to give learners experience of selecting plants and planting containers, together with the basic background knowledge required to underpin their practical skills. Learners must have opportunities to develop practical skills and knowledge through the use of supervised classroom, glasshouse and outdoor activities, and demonstrations of the equipment and techniques involved. Learners should also be given the opportunity to see a range of containers in different situations and containing different planting styles. Learners should have the opportunity to study appropriate plants, their names and characteristics and to select suitable plants for containers.

Emphasis should be on safe and effective working practices for all practical tasks being undertaken. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help learners improve their social and problem-solving skills.

The use of all tools, equipment and materials listed in the *Unit content* should be encouraged. Tutors should demonstrate the knowledge, skills and techniques associated with containers and container planting and learners must practise all these techniques.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Be able to prepare to plant a container Learners will be introduced to health and safety, risk assessments, PPE and manual handling and be allowed time to practise. Learners will be introduced to tools and equipment for planting containers.
Be able to prepare to plant a container <i>Assessment:</i> Learners to prepare a simple risk assessment (written or verbal). Learners to demonstrate safe lifting techniques. (Wearing correct PPE and safe lifting should be integrated into practical work and should be evidenced on practical marking sheets.)
Be able to prepare a container for planting Learners could be shown different types of containers, eg hanging baskets, tubs, troughs, pots and planters, and also examine different sites for containers. Learners could also be shown different materials for lining and supplying drainage to containers as appropriate. Learners could be shown different composts, fertilizers and level of consolidation for different purposes. Use of water retaining gels/granules. Learners could practise filling a variety of containers with different planting media in preparation for planting.
Be able to prepare a container for planting <i>Assessment:</i> Observation of practical work evidenced by a practical marking sheet.
Understand how to select suitable plants for the display Learners could be shown a range of plants suitable for a variety of containers. They should have the opportunity to look at a range of planted containers of different styles. Learners could identify plants for different types of container and name four. They should be able to select at least two plants for making their own display, and state their qualities and characteristics. Learners must also know how to inspect plants for pests, diseases and disorders.

Topic and suggested assignments/activities
Understand how to select suitable plants for the display <i>Assessment:</i> Learners must be able to name four plants and select a minimum of two plants that are appropriate for the container and explain the reasons for selection. They must explain how plant health can be checked.
Be able to plant a container Learners could practise positioning and planting plants in containers, adding compost, consolidating it and watering plants in as appropriate. Learners must practise care in handling plants.
Be able to plant a container <i>Assessment:</i> Observation of practical planting work to be evidenced by a practical marking sheet.
Be able to clear up after planting a container Learners should clean and store all tools and equipment after use, dispose of waste and clean the work area.
Be able to clear up after planting a container <i>Assessment:</i> This task should be assessed during practical work and evidenced on the marking sheet for practical tasks.

Assessment

Learners can build a small portfolio of evidence showing the tasks being undertaken that match the assessment criteria.

Many criteria will need to be assessed directly during practical activities. This should be evidenced by observation records and or witness testimonies. Some criteria may be assessed through the correct completion of forms/tool and plant identification sheets etc. Where this is the case, it should be signed and dated by the assessor.

There is no time limit to assessment but it is assumed that assessment of individual tasks should take about one hour.

To achieve 1.1, learners must select the correct PPE for the task.

To achieve 1.2, learners must demonstrate that they are able to follow safety procedures. This could be evidenced by a witness statement signed by the tutor.

To achieve 1.3, learners must select the correct tools, materials and equipment for the task.

To achieve 2.1, learners must place a container in an appropriate position ensuring it is stable and safe.

To achieve 2.2, learners must select and position appropriate drainage and lining materials for a container.

To achieve 2.3, learners must select compost, and, if necessary, fertilizers and other additives, mix them and place them in the container ready for planting.

To achieve 3.1, learners must select four different plants that are appropriate for a specified container and location.

To achieve 3.2, learners must select at least two plants for a display and outline their characteristics and growing requirements.

To achieve 3.3, learners must specify how the chosen plants will be used in the display.

To achieve 3.4, learners must state how they would inspect plants for health, root growth and pests and diseases.

To achieve 4.1, learners must position plants at correct depth, add additional compost as required and consolidate the compost to ensure plants are firm.

To achieve 4.2, learners must water plants in carefully, avoiding damage to the plants or wastage of water.

To achieve 4.3, learners must handle plants carefully, avoiding damage throughout.

To achieve 5.1, learners must clean and correctly store at least two pieces of equipment after use.

To achieve 5.2, learners must demonstrate that they can maintain a clean and tidy work environment and dispose of debris in accordance with instructions.

Essential resources

The minimum requirements for delivery of this unit are a range of plant containers, appropriate drainage and lining materials, appropriate composts and fertilisers, a range of suitable plants, watering equipment, and an area to display planted containers. Each learner should have sufficient access to a range of materials to enable an element of choice. A work area and an area for cleaning and storing tools and equipment are also required.

Employer engagement and vocational contexts

Visits to local parks, gardens, town centres and garden centres will help learners increase their knowledge base for this unit. Learners may also acquire information about employment prospects within the industry.

Indicative resource materials

Textbooks

Hendy J – *Container Gardening* (Collins, 2004) ISBN 9780007164042

Hessayon Dr D G – *The Container Expert* (Expert Books, 1995) ISBN 9780903505437

RHS – *Containers for Patios* (Dorling Kindersley, 2007) ISBN 9781405315920

RHS – *RHS Practical Guides – Container Gardening* (Dorling Kindersley, 1999)
ISBN 9780751306927

RHS – *RHS Practical Guides – Hanging Baskets* (Dorling Kindersley, 2000)
ISBN 9780751307573

Website

www.rhs.org.uk

Unit 33: Planting and Staking a Tree

Unit code: Y/600/0292

QCF Level: 1

Credit value: 2

Unit aim

This unit includes the knowledge, understanding and skills needed to prepare for and plant a tree; provide immediate aftercare and clear up after the planting operation is over.

Unit introduction

This unit introduces learners to the practical skills needed to plant a tree and establish it correctly immediately afterwards. This will need to take place in an outdoor situation. When carrying out tree planting, correct preparation of the planting medium must also be covered.

Establishment methods may include correct watering, mulching, providing suitable pest prevention (such as rabbit guards) and means of support (such as tree stakes).

Emphasis is placed on safe working practices when undertaking planting and establishment tasks.

Learners will be given time to practise the skills required for each task before assessment takes place.

Although learners will work independently on some tasks, there are also opportunities to work as effective team members when planting and establishing trees, and when keeping the working area safe and tidy. This unit will help learners to develop an understanding of the personal qualities that are valued by potential employers.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to prepare to plant a tree</p>	<p>1.1 Identify and wear appropriate protective clothing</p> <p>1.2 Follow safety procedures as directed to ensure the health and safety of self and others</p> <p>1.3 Organise tools and materials before use</p> <p>1.4 Carefully remove tree from bundle or pot</p> <p>1.5 Prepare tree for planting as instructed</p>
<p>2 Be able to plant and stake a tree and provide immediate aftercare</p>	<p>2.1 Dig planting hole to required depth and width as instructed</p> <p>2.2 Place tree in hole as instructed</p> <p>2.3 Add backfill, compost or fine soil to cover first third of roots and consolidate as instructed</p> <p>2.4 Check tree is straight and adjust if necessary</p> <p>2.5 Complete backfilling to just below trunk flare and consolidate as instructed</p> <p>2.6 Position and drive in stake under guidance</p> <p>2.7 Secure tree to stake and fit protective tubing as instructed</p>
<p>3 Be able to clear up after planting and staking a tree</p>	<p>3.1 Clean and store tools and equipment after use under guidance</p> <p>3.2 Clear and tidy the planting area disposing of debris as instructed</p>

Unit content

1 Be able to prepare to plant a tree

Correct PPE: types and uses of eg steel toecap boots, gardening gloves, hard hats, suitable outdoor clothing; appropriate use; correct storage

Health and safety: simple risk assessment forms; manual handling techniques for lifting tree and digging hole; reason for and methods of keeping work area free of potential hazards that could cause injury to the group or others; current, relevant legislation; PPE

Tools and equipment: types and uses of eg spade, fork, shovel, post mall, tree ties, stakes, rake

Prepare tree for planting: reasons for removing a tree from its container carefully; problems that may occur; problems to check for when preparing a tree for planting eg root damage and need for root pruning, damage to top growth and how to rectify, teasing of congested roots, ensuring adequate moisture around the root ball

2 Be able to plant and stake a tree and provide immediate aftercare

Digging of planting hole: reasons for making sure the hole is deep enough and wide enough; reasons for incorporating bulky organic matter and/or fertiliser into planting hole; methods of ensuring adequate drainage

Placement of tree: centre of hole, adequate space for roots, tree at correct height

Backfill first third: methods of ensuring fine soil mix is added and spread evenly around roots; consolidation using heel of boots to firm down; reasons for consolidation and compaction

Check alignment: stand back and check tree is upright, adjust by gently pushing and re-consolidate

Complete backfilling: consolidation, finished soil height; identifying graft union to ensure it is above final soil level; if the tree is not grafted, reasons for ensuring it is planted back to nursery line

Position and drive in stake: reasons for height of stake and position of stake eg short with single tie, long with two ties and windward side; methods of driving in stake without damaging tree

Tie and guard: how to select the correct tie and methods of tying; correct method of applying the appropriate guard

3 Be able to clear up after planting and staking a tree

Clear up: reasons for cleaning and storing tools safely; reasons for leaving a site tidy; correct places for disposing of organic and inorganic waste products

Essential guidance for tutors

Delivery

This unit is intended as an introduction to the requirements, including health and safety, needed to undertake tree planting and immediate aftercare operations, together with the background knowledge required to underpin practical skills. Learners must have opportunities to develop their knowledge and practical planting and aftercare skills through the use of supervised classroom and outdoor activities, group teaching and demonstrations of the equipment and techniques involved.

The unit has been designed to provide the knowledge and skills needed to undertake tree planting and immediate aftercare. It is recognised that planting situations may differ between centres and teaching must be tailored to meet the needs of the planting situation. Emphasis must be placed on safe and effective working practices in all practical tasks being undertaken. The use of machinery is not a requirement of this unit. Manual techniques should help learners improve their hand-to-eye coordination. Working as part of a team should help learners improve their social and problem-solving skills.

The use of all tools, PPE and equipment listed in the *Unit content* should be encouraged, although other tools can be used or substituted depending on the planting area.

Tutors should demonstrate the various techniques and skills needed to plant a tree correctly and provide immediate aftercare. Learners must practise all these techniques. Tutors will need to deliver the knowledge, skills and techniques associated with tree planting, staking and guarding.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
<p>Be able to prepare to plant a tree</p> <p>Learners shown the tools, PPE and equipment. Tutor-led discussion on uses and safety of all relevant tools, PPE and equipment. Learners work individually on tool, PPE and equipment identification sheets. Videos or presentations can be shown on relevant health and safety. Learners can fill out risk assessment sheets individually.</p> <p>Learners recognise the types of containers and packages that trees are grown or delivered in. Importance should be given to correct handling and removal to ensure that roots are not damaged and the root ball is not compromised. This can be as labelled pictures or as a written step-by-step guide.</p> <p>Tutors should have pictures, or actual plants, showing signs of damage to roots and shoots. Learners must be able to recognise these problems and explain how to rectify them. This could be as labelled pictures or as a written step-by-step guide.</p>

Topic and suggested assignments/activities
<p>Be able to prepare to plant a tree</p> <p><i>Assessment:</i> To ensure all assessment criteria for this part are met, it is advised that the tutor devises an assessment sheet that covers health and safety, correct selection and use of tools, PPE and equipment, and shows that care is taken when removing the tree from its container and any damage is dealt with correctly.</p> <p>A completed individual risk assessment can be attached to this, along with any witness statements that could back up the assessment.</p> <p>If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.</p>
<p>Be able to plant and stake a tree and provide immediate aftercare</p> <p>Tutor could demonstrate digging the hole to correct depth and size, correct positioning of the plant, soil improvement, backfilling, consolidating, staking, tying and placing of guard.</p> <p>This can be photographed and learners given the pictures to place in the correct order and label with appropriate information.</p> <p>Learners could research different types of soil improvers and draw diagrams of graft unions or nursery lines to ensure understanding of correct planting depth.</p>
<p>Be able to plant and stake a tree and provide immediate aftercare</p> <p><i>Assessment:</i> To ensure all assessment criteria are met, it is advised that the tutor devises an assessment sheet that covers correct digging of hole, positioning of the tree, addition of soil improver, backfilling, consolidation, adjustment, final soil level, correct height of tree, positioning and driving of stake, tying and guarding.</p> <p>A completed individual risk assessment can be attached to this, along with any witness statements that could back up the assessment.</p> <p>If learners agree, the whole process can be recorded on video as evidence and submitted with a completed risk assessment.</p>
<p>Be able to clear up after planting and staking a tree</p> <p>Tutor-led discussion on why tools, PPE and equipment should be cleaned and stored away safely, and also on why it is important to leave the planting area clean and tidy once the task has been completed.</p> <p>Learners can be asked to list, in small groups, where they think inorganic and organic waste should be disposed of after the task has been completed.</p>
<p>Be able to clear up after planting and staking a tree</p> <p>There is no need to assess this part separately. Assessment should be integrated into the planting and establishment operations.</p>

Assessment

Learners can build a small portfolio of evidence showing the tasks being carried out that match the assessment criteria.

Most criteria will need to be assessed directly by the tutor during tree planting and immediate aftercare operations. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. If using video evidence, the permission of parents/guardians should be obtained before carrying out the assessment. The video must clearly show all the activities required to achieve the criteria and feedback must be delivered promptly. Some of the criteria may be assessed through the correct completion of forms. Where this is the case, it should be marked and signed by the tutor and added to the portfolio. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Although there is no time limit to assessment, it is assumed that assessment of individual tasks should take no longer than one hour.

To achieve 1.1, learners must identify and wear at least one piece of protective clothing relevant to the task.

To achieve 1.2, learners must work in accordance with health and safety requirements as instructed by the tutor.

To achieve 1.3, learners must prepare at least two tools and one piece of equipment relevant to the task.

To achieve 1.4, learners must demonstrate the ability to remove the tree from its pot or bundle carefully as instructed. This may be evidenced by a witness statement signed by the tutor.

To achieve 1.5, learners must assist with identifying the need for water or formative pruning of the tree before planting.

To achieve 2.1, learners must dig a hole big enough to accommodate the root ball of the selected tree. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.2, learners must place the tree correctly in the hole as instructed. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.3, learners must backfill the hole correctly by one third with the selected planting medium and firm it down. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.4, learners must check that the tree is upright, and adjust if needed. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.5, learners must complete the backfilling of the hole and firm down. This may be evidenced by a witness statement signed by the tutor.

To achieve 2.6, learners must assist with the driving in of a stake as instructed.

To achieve 2.7, learners must tie the tree to the stake and add a protective tube. This may be evidenced by a witness statement signed by the tutor.

To achieve 3.1, learners must clean and store at least two tools and one piece of equipment after the task has been completed.

To achieve 3.2, learners must leave the site clean and clear of debris. Any waste must be disposed of in the correct bin. This may be evidenced by a witness statement signed by the tutor.

Essential resources

The minimum requirement needed to deliver this unit is an area where tree planting can take place. This may be a new or established border or an area of open ground. Each learner should have access to enough trees and materials to enable adequate practice to achieve the assessment standards. An area for storing and cleaning tools and PPE is also needed.

Employer engagement and vocational contexts

Part of the knowledge base learners need to complete this unit could be developed by visiting local gardeners or commercial landscape firms. A talk by the planting supervisor explaining the need for correct planting techniques and suitable aftercare would show this unit in its vocational context. This may also alert learners to future employment prospects within the chosen industry. Contacting local landscape firms may give learners an opportunity to see mass landscape planting taking place in their local area, alerting them to the benefits of large tree and shrub planting for the local environment.

Indicative resource materials

Textbooks

There are no specific textbooks about tree planting aimed at Level 1 learners. The textbook listed refers to the subject and contains relevant picture guides.

Brickell C – *RHS Encyclopedia of Gardening* (Dorling Kindersley, 2007)
ISBN 9781405322270

Website

www.rhs.org.uk/advice

This website is updated and changed on a monthly basis and contains varying amounts of useful information.

Unit 34: Assist with Feeding and Watering Horses

Unit code: A/600/0463

QCF Level: 1

Credit value: 2

Unit aim

This unit provides the learner with the basic skills required for providing routine feeding and watering to individual and groups of horses, working in supervised environments.

Unit introduction

This unit will develop the knowledge, understanding and practical skills learners need to assist with the feeding and watering of horses. Providing food and water to stabled and grass-kept horses is an essential part of working with horses, and so the development of these skills is fundamental for learners hoping to find employment within the horse industry. Other essential skills developed in this unit are cleaning and replacing feeding equipment and disposing of waste safely and correctly.

This unit will also develop learners' ability to work safely in order to maintain the health and safety of horses, themselves and others is also developed by this unit. Safe working practices are very important within the industry and an awareness of hazards and the reporting procedures are fundamental to the horse industry and employability. Knowledge of health and safety when working with horses is also fundamental at Level 1 and beyond.

This unit will also provide opportunities to develop other skills such as working with others, improving own learning and performance and communication.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
<p>1 Be able to assist with providing feed and water for stabled and grazing horses</p>	<p>1.1 Feed horses according to instructions, to include both forage and concentrate</p> <p>1.2 Supply horses with water using the correct sources, system and quantities</p> <p>1.3 Report any changes in the feeding and drinking habits of horses to the appropriate person</p> <p>1.4 Clean and replace equipment, ensuring it is ready for use</p>
<p>2 Be able to work safely</p>	<p>2.1 Dispose of waste from feeding safely and correctly</p> <p>2.2 Maintain the health and safety of horses, self and others</p> <p>2.3 Correctly identify and report any hazards to the appropriate person</p>

Unit content

1 Be able to assist with providing feed and water for stabled and grazing horses

Forage feeds: eg hay, haylage, grass

Concentrate feeds: eg mixes, cubes, sugar beet, oats, barley

Water sources: buckets, automatic drinkers, water troughs, streams

Preparing feed: soaking of sugar beet, soaking of hay, mixing up feeds according to feed board, filling and weighing haynets

Equipment: eg feed buckets, feed scoop, manger, haynet, hayrack; how to clean

Rules of feeding: eg feeding little and often, keeping to a routine, providing a fresh supply of water at all times, providing plenty of roughage, making changes to the diet slowly

Monitoring: intake of food and water; reporting changes

2 Be able to work safely

Hygiene: hand washing, cross contamination, cleanliness; importance of a clean feed room

Disposal: appropriate methods of disposal relevant to feed type

Health and safety: PPE; procedure for hay/feed allocation to horses at grass; correct tying up of a haynet; hazard identification; hazard reporting; accident reporting

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be through a series of practical activities using horses and yard equipment. The provision of feed and water to horses, the checking of feeding and drinking habits and the disposal of waste feed can form integral parts of working on an equine unit and can be taught, practised and assessed in that environment. As learning outcome 1 specifies that grazing horses also be included, it is important that learners also get practice and experience of checking water and grazing availability in the field and putting out piles of hay (and possibly feed) to grazing horses. The theory behind these activities can be delivered during discussion-based activities, demonstrations, and individual and group-work.

Safe working practices should be integral to all work on the equine unit and can be taught, practised and assessed alongside the delivery of the content of learning outcome 1. For example skills such as the ability to tie a haynet up safely and correctly are within both learning outcomes of the unit, as it is mentioned under feeding forage in 1.1 and maintaining the health and safety of horses, self and others in 2.2.

Learners will need to develop appropriate skills and knowledge during formative practical sessions. Assessment is likely to take place on a continuous basis during the time the learner is enrolled on the programme, with assessment taking place when the learner has developed the appropriate level of skill.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussion to develop learners' knowledge of the principles of feeding and watering horses and working safely.
Demonstration from tutors of preparing feeds, feed allocation to grass-kept and stabled horses and safe working practices.
Practical work involving preparing feeds and haynets and supplying feed, forage and water to stable-kept and grass-kept horses.
Practical work involving disposal of waste from feed, cleaning the feed room and feeding utensils.

Assessment

Achievement of the assessment criteria should be evidenced through contextualised, vocationally relevant and practical experiences, with tasks designed for the targeted criteria. Some criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners are required to feed horses according to instructions, to include both forage and concentrate. This is likely to be assessed in a practical assessment where learners prepare concentrate feeds and haynets according to instructions on a feedboard. Learners need to be assessed on their ability to correctly follow instructions in order to prepare the correct quantity and type of feed and to safely distribute the feeds to the intended horses. The provision of hay in a haynet, on the floor or in a hayrack needs to form part of the assessment, as does providing hay and/or concentrate feed to horses out at grass as well as stabled horses. Observation records are likely to be the most appropriate method of recording the assessment.

For 1.2, learners are required to supply horses with water using the correct sources, system and quantities. This is likely to be assessed in a practical assessment where learners provide fresh water to stabled horses and grass-kept horses. Learners should be assessed on their ability to provide sufficient clean water using appropriate methods. Safe lifting and carrying techniques should be used where necessary. Observation records are likely to be the most appropriate method of recording the assessment.

For 1.3, learners are required to report any changes in the feeding and drinking habits of horses to the appropriate person. Completion of this criterion is most effectively assessed and referenced through witness statements provided by the tutor/yard supervisor during practical work on the yard. The witness statements must show that learners have reported at least one feeding observation for a minimum of two different horses. Examples of possible feeding observations include decreased/increased appetite, fussy eating, presence of feeding-related stereotypic behaviour, change in behaviour during eating, waste feed, change in pecking order behaviour of field-kept horses, coprophagy, wood chewing and soil licking. The witness statements must also show that the learner has reported at least one drinking observation for a minimum of two different horses. Examples of drinking observations include over/under drinking, spilt water buckets, and the presence of feed or faeces in water.

For 1.4, learners are required to clean and replace equipment, ensuring it is ready for use. This is likely to be assessed by a practical assessment on the yard by observation of learners cleaning equipment such as feed buckets, water buckets, mangers and feed scoops and putting them in the appropriate places for future use. A minimum of two pieces of equipment should be cleaned and replaced. Observation records are likely to be the most appropriate method of recording the assessment.

For 2.1, learners are required to dispose of waste from feeding safely and correctly. A practical assessment recorded by witness statements/observation records together with photographic evidence are a likely means of assessment. Learners should be assessed on their ability to choose an appropriate means of disposal of feed waste from the feed room floor and/or a manger or stable floor. The chosen disposal method should be in line with current legislation on waste disposal.

For 2.2, learners are required to maintain the health and safety of horses, self and others. This is likely to be assessed alongside 1.1, 1.2, 1.3 and 2.1 as learners should demonstrate an awareness of health and safety and good practice while completing all practical assessment tasks. The observation records for the practical assessments for the criteria in learning outcome 1 and 2.1 should include references to health and safety awareness during the tasks.

For 2.3, learners are required to correctly identify and report any hazards to the appropriate person. Completion of this criterion is most effectively assessed and referenced through witness statements provided by the tutor/yard supervisor during practical work on the yard. The witness statements must show that learners have reported at least two different kinds of hazard during their time working on the yard. Learners will have developed an awareness of hazards during their yard induction and during formative feedback while carrying out duties on the yard. Instructions on the correct procedure for reporting hazards will have been made clear to the learners.

Essential resources

Access to a variety of horses suitable for Level 1 learners should be provided on a well-equipped equine unit. Transport for visits to stables should be provided for those centres not able to provide sufficient opportunity to meet the criterion requirements within the centre. A range of books, equine magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an equine unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready for progression to a higher level of study in an equine-related subject, or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The books listed are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Bishop R – *The Horse Nutrition Bible: The Comprehensive Guide to the Correct Feeding of Your Horse* (David & Charles PLC, 2005) ISBN 9780715322093

Briggs K – *Understanding Equine Nutrition* (Horse Health Care Library) (Eclipse Press, 2007) ISBN 9781581501551

British Horse Society – *Complete Horse & Pony Care* (Collins, 2005) ISBN 9780007174676

British Horse Society – *The Manual of Horsemanship* (The Pony Club, 2007) ISBN 9780955337413

Houghton Brown J, Pilliner S and Davies Z – *Horse and Stable Management, 4th edition* (Wiley-Blackwell, 2003) ISBN 9781405100079

Pilliner S – *Horse Nutrition and Feeding, 2nd edition* (Wiley-Blackwell, 1999) ISBN 9780632050161

Journals

Horse & Hound

Horse & Rider

National Equine Student

Your Horse

Websites

www.bhs.org.uk	The British Horse Society
www.equisearch.com	Equisearch
www.thehorse.com	The Horse.com

Unit 35: Assist with the Preparation for Exercise and Aftercare of Horses

Unit code:	K/502/5168
QCF Level:	1
Credit value:	6

Unit aim

This unit involves the general daily care and hygiene of the stable kept horses which includes the care of materials used for bedding horses. This unit also covers assisting with grooming horses, putting on and removing horse clothing, putting on and removing tack and cleaning tack.

Unit introduction

It is imperative that a horse is kept in a safe clean environment to maintain health and to help prevent disease. It is also essential for horses to be clothed appropriately when ridden, in order to make riding as safe and comfortable as possible.

Throughout this unit, learners' practical ability, underpinning knowledge and awareness of health and safety when handling horses will be developed. This unit will also enable learners to develop the necessary practical skills and underpinning knowledge to be able to provide a suitable environment for a stable kept horse. This will include the ability to assist with application, fitting, maintenance and storage of rugs for both the stable kept horse and the horse out at grass. Learners will also gain a thorough knowledge and understanding of the importance of tack maintenance and develop the ability to prepare a horse for ridden work under supervision.

This unit will also provide opportunities to develop essential communication skills.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Maintain bedding in a stable	1.1 Muck out stables 1.2 Bed down stables 1.3 Maintain bedding for a stable kept horse 1.4 State the reasons for providing bedding in a stable 1.5 List the different types of bedding in common use and the requirements of good quality bedding 1.6 State the daily maintenance requirement for the muck heap and storage area
2 Groom horses	2.1 Groom a horse in preparation for ridden work 2.2 Care for the horse following ridden work 2.3 State the reasons for grooming horses 2.4 State the required safety procedures to be adhered to when grooming horses
3 Put on and remove horse clothing	3.1 Put on stable and outdoor rugs 3.2 Remove stable and outdoor rugs 3.3 Clean stable and outdoor rugs 3.4 State the purpose of different types of rugs in common use 3.5 State the maintenance requirements for rugs in daily use 3.6 State the required safety procedures to be adhered to when putting rugs on and removing rugs from horses
4 Tack up and un-tack horses	4.1 Tack up horses for ridden work 4.2 Un-tack horses following ridden work 4.3 Identify parts of a saddle and bridle 4.4 Identify nosebands in common use

Learning outcomes	Assessment criteria
5 Clean tack	5.1 Take apart and clean a bridle 5.2 Take apart and clean a saddle 5.3 Re assemble a bridle and a saddle 5.4 List the reasons for cleaning tack 5.5 State the cleaning requirements of leather and synthetic materials 5.6 State the required safety checks for bridles and saddles 5.7 State the care requirements for different types of girths

Unit content

1 Maintain bedding in a stable

Maintain bedding in a stable: bedding types eg straw, shavings, paper, rubber matting, deep litter; advantages and disadvantages of bedding types; importance of good quality bedding; storage of bedding material; mucking out and skipping out a stable; identification, safe handling and storage of tools; maintenance of a muck heap, trailer or storage area

Health and safety: identification of personal risk when handling horses eg bites, kicks, faeces, parasites; personal protective equipment (PPE); personal hygiene; first aid methods and facilities; accident reporting

2 Groom horses

Handling a horse: recognising horse behaviour; correct methods of approaching horses; fitting a head collar and tying up a horse correctly and safely

Grooming a horse: knowledge of items in a grooming kit and their uses; care of the grooming kit; the meaning of 'quartering' and how and when it should be carried out; the meaning of 'strapping' and how and when it should be carried out; basic foot care

Health and safety: identification of personal risk when grooming horses eg bites, kicks, faeces, parasites; personal protective equipment (PPE); personal hygiene; first aid methods and facilities; accident reporting

3 Put on and remove horse clothing

Put on and remove horse clothing: stable rugs, coolers and outdoor rugs and their uses; correct fitting and removal of rugs; general care and storage of rugs

Health and safety: identification of personal risk when handling horses eg bites, kicks, faeces, parasites; personal protective equipment (PPE); personal hygiene; first aid methods and facilities; accident reporting

4 Tack up and un-tack horses

Tack up and un-tack horses: types of saddles in common use (jumping, general purpose and dressage); types of nosebands in common use (cavesson, grackle, drop, flash); parts of a snaffle bridle and a GP saddle; application, fitting and removal of a GP saddle and a snaffle bridle; application, fitting and removal of brushing boots

Health and safety: identification of personal risk when handling horses eg bites, kicks, faeces, parasites; personal protective equipment (PPE); personal hygiene; first aid methods and facilities; accident reporting

5 Clean tack

Clean tack: methods of cleaning and maintaining saddles and bridles of both leather and synthetic material; dismantling and reassembling saddles and bridles; checking saddles and bridles for defects; maintenance of different types of girths, saddle cloths and numnahs; cleaning equipment; storage of tack

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be through practical activities, but should also include discussions, demonstrations and research using library resources. Delivery should stimulate and motivate learners. Health and safety of both learners and horses should be paramount, and learners should not be expected to deal with difficult or potentially dangerous horses or situations beyond their capabilities and limited experience.

This unit will require learners to demonstrate that they can carry out routine stable management duties safely. This will include essential grooming skills, maintenance and the application of tack and other horse clothing such as rugs and care of a horse before and after exercise. Naturally occurring opportunities should be exploited where possible, in order to enable learners to experience realistic situations in preparation for work in the equine industry.

Basic handling skills will also be developed through hands-on experiences throughout the delivery of this unit. Assessment is likely to take place on a continuous basis during the time learners are enrolled on the programme. Final assessment will take place once learners have developed the appropriate level of skills to carry out the required task.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussions to develop learners' knowledge of health and safety when handling horses.
Demonstrations from tutors involving general stable management tasks, grooming procedures, application and general maintenance of tack and rugs.
Practical work covering aspects of general stable management such as mucking out, skipping out and general maintenance of a muck heap.
Practical work covering all aspects of grooming a horse before and after exercise.
Practical work covering all aspects of maintaining, fitting and removing horse rugs.
Practical work covering all aspects of general maintenance, fitting and removing tack.
Assessment activities.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners will be required to muck out a minimum of two stables with different bedding substrates. This criterion could be assessed directly by the tutor during practical activities. Further evidence can be gathered through photographic evidence and/or observation records.

For 1.2, learners will be required to bed down a stable using a minimum of two bedding substrates. This criterion is likely to be assessed with 1.1 using the same assessment format.

For 1.3, learners will be required to demonstrate the ability to maintain a bed within a stable suitable for a horse to be kept. This can be continually assessed throughout the practical sessions via observation records or a diary.

For 1.4, learners will be required to state the reasons for providing bedding in a stable. This could be assessed with 1.1 and 1.2 in the form of a discussion record between the tutor and learners.

For 1.5, learners will be required to identify the different bedding substrates commonly used and to recognise the requirements of good quality bedding. This criterion could be assessed in the form of a discussion record as in 1.4, or in the form of a poster produced by learners.

For 1.6, learners will be required to state how to maintain a muck heap and storage area. This criterion in the form of a discussion record between the tutor and learners during practical activities and could be further evidenced through pictorial evidence with additional notes in the form of a poster.

For 2.1, learners must be able to demonstrate the ability to groom a horse in preparation for ridden work within a practical timescale. This criterion can be assessed during practical sessions directly by the tutor. Further photographic evidence could also be provided.

For 2.2, learners must be able to demonstrate the ability to care for a horse after exercise. Naturally occurring assessment opportunities should be exploited where possible. Ideally learners should be given the opportunity to assist with the care of a horse that has just finished exercise. Alternatively mock scenarios can be set up during practical sessions and assessed directly by the tutor.

For 2.3, learners must be able to explain the importance of grooming. This criterion could be assessed through verbal discussions directly with the tutor in conjunction with the assessment of 2.1, or via written evidence.

For 2.4, learners must be able to demonstrate knowledge of health and safety measures when grooming a horse. This could be continually assessed during practical activities for this unit and further evidenced through verbal discussion records between the tutor and learners.

For 3.1, learners are required to put stable and outdoor rugs on a horse in a correct and safe manner. They should be able to recognise an ill-fitting rug and alter where applicable. This criterion is likely to be assessed in the form of a practical session carried out directly by the tutor.

For 3.2, learners are required to remove stable and outdoor rugs from a horse in a correct and safe manner. This criterion could be assessed in a similar form and in conjunction with 3.1.

For 3.3, learners must be able to demonstrate how to clean stable and outdoor rugs. This criterion could be assessed during a practical session directly by the tutor or in the form of a discussion record.

For 3.4, learners will need to demonstrate an understanding of the different types of rugs and their uses. This criterion can be assessed in the form of a discussion record in conjunction with the assessment of 3.1.

For 3.5, learners must demonstrate knowledge of how to maintain different types of rugs on a daily basis. This criterion can be demonstrated during a practical activity or in the form of a discussion record in conjunction with 3.3.

For 3.6, learners must state the required health and safety procedures when putting on and taking off rugs. This criterion is likely to be assessed when carrying out assessments for 3.1 and 3.2.

For 4.1, learners must tack up a horse in preparation for ridden work. This should include the use of a snaffle bridle and a GP saddle. This criterion can be assessed through practical assessment and evidenced by observation records/witness statements or photographic evidence.

For 4.2, learners must assist with the removal of tack from a horse following ridden work. This should include the removal of a snaffle bridle and a GP saddle. This criterion is likely to be assessed with 4.1 through practical assessment and evidenced by observation records/witness statements or photographic evidence.

For 4.3, learners are required to correctly identify the parts of a GP saddle and snaffle bridle. This criterion can be assessed through verbal discussion directly with the tutor, independently or with 4.1.

For 4.4, learners are required to identify a selection of nosebands in common use. This criterion can be assessed through practical assessment in the form of a verbal discussion record, directly with the tutor or via a written piece of evidence.

For 5.1, learners must take apart a snaffle bridle and clean it in order to maintain its condition. This criterion can be assessed as a practical and evidenced by observation records or witness statements.

For 5.2, the learner must take apart a GP saddle and clean it in order to maintain its condition. This criterion can be assessed as a practical and evidenced by observation records or witness statements.

For 5.3, learners will need to show competence in reassembling a snaffle bridle and GP saddle after cleaning. This criterion can be assessed in a similar way and in conjunction with 5.1 and 5.2.

For 5.4, learners must list the reasons for cleaning tack. This criterion can be assessed in the form of a discussion in conjunction with 5.1 and 5.2 or via a written piece of evidence.

For 5.5, learners must be able to state the cleaning requirements of both a leather saddle and a synthetic saddle in order to maintain their condition. This criterion could be assessed independently or with 5.2, as a practical and in the form of a discussion directly with the tutor.

For 5.6, learners must be able to identify and carry out the necessary safety checks for saddles and bridles. This criterion can be assessed independently or with 5.1 and 5.2, in the form of a discussion between tutor and learner.

For 5.7, learners are required to identify the range of girths available and state how to care for these girths in order to maintain their condition. This criterion can be assessed by the tutor during practical sessions and evidenced by observation records or witness statements.

Essential resources

Access to a variety of suitable horses, bedding materials, accommodation, and a good range of tack and horse clothing is essential, with appropriate levels of supervision available to support learning. Transport for visits to other equestrian establishments may be required for those centres not able to provide sufficient opportunity to meet the criterion requirements within the centre. A range of books, horse magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an equestrian unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready for progression to a higher level of study in an equestrian-related subject or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

Auty I and Batty-Smith J – *BHS Complete Manual of Stable Management* (Kenilworth Press Ltd, 2008) ISBN 9781905693184

Cave M – *The Course Companion for BHS Stage One* (J A Allen & Co Ltd, 2000) ISBN 9780851317656

Cave M – *The Course Companion for BHS Stage Two* (J A Allen & Co Ltd, 2000) ISBN 9780851317663

Houghton Brown J, Pilliner S and Davies Z – *Horse and Stable Management, 4th edition* (Wiley-Blackwell, 2003) ISBN 9781405100079

Journals

Horse & Hound

National Equine Student

Your Horse

Websites

www.bhs.org.uk

www.horseandhound.co.uk

Unit 36: Maintain the Health of Horses

Unit code: J/502/5176

QCF Level: 1

Credit value: 6

Unit aim

This unit enables learners to assist in dealing with general health problems associated with everyday care of the horse in the stable and kept out at grass.

Unit introduction

The aim of this unit is to develop learners' ability to identify good and poor health in horses, assist with the care of a sick horse, assist with treatment of ailments and handle horses, all of which are essential components of working with horses.

Knowledge and ability to recognise the signs associated with good and poor health is central to the care of horses and is essential for learners hoping to find employment within the horse industry. A knowledge of the normal expectations of horse condition and wellbeing and the factors that affect health and condition will be developed by this unit.

Working in the horse industry frequently involves dealing with injuries and ailments of horses, and so a large part of this unit is concerned with enabling learners to develop the skills to be able to assist with the procedures for identifying injuries and ailments, as well as to assist with carrying out treatments and sick nursing procedures and the associated monitoring and recording.

Practical ability, underpinning knowledge and awareness of health and safety when applying equipment to horses, walking and trotting up in hand and turning out in an enclosed space will be developed. These skills are integral to working with horses and so development of these basic equine skills are fundamental at Level 1 and beyond.

This unit will also provide opportunities to develop other skills such as working with others, improving own learning and performance and communication.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Identify signs of good and poor health	1.1 Identify signs of good health 1.2 Recognise signs of poor health 1.3 State normal temperature, pulse and respiration 1.4 State the normal expectation of coat and skin condition, feeding habits and weight 1.5 State how to physically examine the horse for warmth 1.6 List the factors that can influence the condition and health of horses 1.7 List the content of a medicine cupboard
2 Care for a sick horse	2.1 Prepare a stable for a sick horse 2.2 List the principles for caring for a sick horse 2.3 State the significance of a horse's body temperature 2.4 State the need for regular checks and monitoring
3 Treat horse ailments	3.1 Check a horse for injury 3.2 Identify possible sites of injury 3.3 Identify common ailments 3.4 Describe the types, causes and basic treatment of wounds 3.5 State the commonly found skin conditions in horses 3.6 State the recording requirements as part of monitoring progress and health 3.7 State when to call the vet
4 Move the horse in hand and turn out	4.1 Put on equipment to move the horse in hand 4.2 Walk, trot and turn a horse in hand 4.3 Turn a horse out into an enclosed space 4.4 List the safety considerations to be taken into account when moving and turning a horse out into an enclosed space

Unit content

1 Identify signs of good and poor health

Good health: normal behaviour, normal appetite, shiny coat, salmon pink mucous membranes, temperature, pulse and respiration rate within normal parameters, fully hydrated, sound limbs, droppings of normal frequency and consistency, normal colour and frequency of urine; condition scoring

Poor health: abnormal behaviour, decreased appetite, congested/anaemic mucous membranes, elevated temperature, pulse, respiration, discharge, dehydrated, unsound limbs, abnormal frequency and consistency of droppings, abnormal colour and frequency of urine

Factors influencing condition and health: illness, age, breeding status, nutrition, workload, stress

Medicine cupboard contents: bandages, dressings, poultice, scissors, thermometer, stethoscope, antiseptic preparations; COSHH

2 Care for a sick horse

Accommodation: environment, isolation, bedding

Monitoring: parameters eg temperature, pulse, respiration, appetite, demeanour, droppings; importance of monitoring checks

Sick nursing principles: warmth, comfort, diet, medication, hygiene, communication with vet

3 Treat horse ailments

Injuries: checking for injury eg identification of heat, pain, swelling; sites eg foot, lower leg, knee, hock, stifle

Common ailments: eg colic, thrush, laminitis, azoturia, lymphangitis, strangles, influenza

Types/causes of wounds: abrasion, laceration, puncture, incision, contusion; causes eg kicks, tears, falls, knocks, nail pricking/binding

Treatment: cleaning of wound, cold therapy, poulticing, tubbing, topical preparations, dressings/bandages; identification of when veterinary attention is required

Recording: temperature, pulse rate, respiration rate, medication administered

Skin conditions: ringworm, sweet itch, girth galls

4 Move the horse in hand and turn out

Equipment: headcollar, bridle, chifney, PPE

Horse handling: putting on and taking off equipment, health and safety, efficiency; manner, voice, body position, turning procedure

Essential guidance for tutors

Delivery

Delivery of this unit is likely to be through a series of practical activities using horses. The handling, moving and turning out aspects of the unit form integral parts of working on an equine unit and can be taught, practised and assessed in that environment. Identification of signs of good health, examining for warmth and checking for injury can also be taught, practised and assessed on an equine unit. The theory behind these activities can be delivered during discussion-based activities, demonstrations, and individual and group-work.

Recognising poor health, identifying common ailments, wound treatment and sick nursing procedures can be delivered through discussion, peer work and simulation, making use of any naturally occurring opportunities should they arise, such as the presence of a sick or injured horse. Audio-visual resources can also be employed to assist with delivery of these aspects of the unit. The preparation of a stable for a sick horse can be taught, practised and assessed using either a real or a simulated situation.

Learners will need to develop appropriate skills and knowledge during formative practical sessions. Assessment is likely to take place on a continuous basis during the time the learner is enrolled on the programme, with assessment taking place when the learner has developed the appropriate level of skill.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Research work and formative discussions to develop learners' knowledge of horse health, first aid, sick nursing, horse ailments and treatments.
Demonstrations from tutors of checking horses for health, injuries, identifying ailments.
Practical work on identifying signs of good and poor health, examining for warmth and checking for injury.
Demonstrations from tutors of handling techniques and procedures for walking, trotting, turning horses in hand and turning out.
Practical work on the equine unit involving preparing stables for sick horses, handling horses, and turning out.

Assessment

Achievement of the assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with tasks designed with the targeted criteria in mind. Some criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

For 1.1, learners are required to identify signs of good health in a horse. This is likely to be assessed orally alongside a real horse, although it could also be evidenced in written format such as a poster.

For 1.2, learners are required to recognise the signs of poor health. This is likely to be assessed orally alongside a real horse, with learners identifying to the assessor the changes that would be seen if the horse was in poor health. Prior to the completion of this task learners would need to be able to identify the signs of good health in a horse, so this task could be assessed straight after 1.1. This task could also be completed in written format.

For 1.3, learners are required to state the normal temperature, pulse and respiration rate of a horse. This can be assessed orally or as a written task. It is important that learners state the units of measurement of the parameters. This can be assessed at the same time as 1.1.

For 1.4, learners are required to state the normal expectation of coat and skin condition, feeding habits and weight. This assessment could be linked to assessment 1.1 for the signs of good health, with the learners identifying how the coat, skin, feeding habits and weight indicate that the horse is in good health. Learners would need to be familiar with basic condition scoring in order to be able confidently state what to expect to observe in the body condition of a horse that is of a healthy weight.

For 1.5, learners are required to state how to physically examine the horse for warmth. This could be assessed either orally or in written format and assessed alongside any of the above criteria.

For 1.6, learners are required to list the factors that can influence the condition and health of horses. This is likely to be assessed at the same time as 1.1, 1.2 and/or 1.4, where reasons can be drawn from learners as to why a horse may not be in normal condition and health.

For 1.7, learners are required to list the content of a stable's medicine cupboard. This could be assessed by an oral or a written task.

For 2.1, learners are required to prepare a stable for a sick horse. This is likely to be assessed by a practical assessment, where the learner demonstrates that a suitable type and depth of bedding has been chosen and that food and water have been provided in a suitable type and form for a sick horse and is supplied in a way that allows monitoring of consumption to take place. The assessment does not necessitate a sick horse to actually be present. Instructions should be made clear to the learners and recorded in the observation record. Photographic evidence would provide a useful record.

For 2.2, learners are required to list the principles for caring for a sick horse. This is likely to be assessed either orally or in written format.

For 2.3, learners are required to state the significance of a horse's body temperature. This could be assessed at the same time as 1.3, in either written or oral format.

For 2.4, learners are required to state the need for regular checks and monitoring. Prior to this task learners should have a knowledge of the types of checks and monitoring that are required of a sick horse, and so this would most clearly be assessed after 2.2. A specific case study of a sick horse could be used to focus learners' answers.

For 3.1, learners are required to check a horse for injury. This is likely to be assessed by a practical task where a horse is presented and the learners are observed as they systematically check the horse for injury and then report back to the assessor. Instructions should be made clear to the learners and recorded in the observation record.

For 3.2, learners are required to identify possible sites of injury. This is most clearly evidenced within the assessment for 3.1, where during the check of the horse the most detailed attention should be paid to the obvious sites.

For 3.3, learners are required to identify common ailments. This could be assessed through observation of typical symptoms of common ailments displayed either on a real horse or using photos or diagrams of horses suffering from common ailments. Identification of a minimum of two common ailments needs to be carried out.

For 3.4, learners are required to describe the types, causes and basic treatment of wounds. This is likely to be assessed by an oral or written assessment. The written assessment could take the form of a poster or first aid information leaflet.

For 3.5, learners are required to state the commonly found skin conditions in horses. This is likely to be assessed by an oral or written task. It could possibly be assessed alongside 1.4 if delivery of learning on skin conditions has taken place at the time of assessment.

For 3.6, learners are required to state the recording requirements as part of monitoring progress and health. This assessment could be amalgamated with 2.4 and be assessed either in oral or written format. In order to focus learners' answers, a specific case study of a sick horse with a specific ailment could be used.

For 3.7, learners are required to state when to call the vet. This could take the form of an oral or written assessment. A written assessment could take the form of a leaflet that informs owners of the occasions when it may be necessary to call the vet.

For 4.1, learners are required to put on equipment to move the horse in hand. The assessment should take place within a safe and suitable environment with a horse that is known to the learner. The assessment should take the form of a practical task where the learner is required to demonstrate that they are able to tie a horse up correctly using a headcollar and leadrope. It is recommended that this criterion leads on to 4.2, in which case a bridle should then be correctly put on in preparation for walking and trotting up. Learners should wear appropriate PPE as part of the assessment for this task. Instructions should be made clear to learners and recorded in the observation record.

For 4.2, learners are required to walk, trot and turn a horse in hand. A practical assessment within a safe and enclosed area is necessary. Learners should show confidence in their manner and be able to successfully carry out the task with regard to health and safety considerations. Instructions should be made clear to learners and recorded in the observation record.

For 4.3, learners are required to turn a horse out into an enclosed space. Assessment of this criterion will probably follow on from 4.2. Observation records are likely to be the most appropriate method of recording the assessment.

For 4.4, learners are required to list the safety considerations to be taken into account when moving and turning a horse out into an enclosed space. Assessment of this could be partly integral to 4.3, as learners would need to show consideration for health and safety while they were performing the task. Learners would need to identify to their tutor the safety considerations associated with the task and these would most appropriately be recorded on an observation record.

Essential resources

Access to a variety of horses suitable for Level 1 learners should be provided on a well-equipped equine unit. Transport for visits to stables should be provided for those centres not able to provide sufficient opportunity to meet the criterion requirements within the centre. A range of books, equine magazines, CD ROMs and DVDs should be available. Access to ICT and the internet is recommended. Learners must have access to and use correct PPE.

Employer engagement and vocational contexts

Learners at this level are likely to be learning in an equine unit attached to a college or similar training provider. On completion of the programme of study, learners may be ready for progression to a higher level of study in an equine-related subject, or to employment or voluntary work in a supervised situation.

Indicative resource materials

Textbooks

The textbooks listed are indicative only. Centres are encouraged to use other resources that suit the needs of their learners.

Abutarbush S M – *Illustrated Guide to Equine Diseases* (WileyBlackwell, 2009)
ISBN 9780813810713

British Horse Society – *Complete Horse & Pony Care* (Collins, 2005) ISBN 9780007174676

British Horse Society – *The Manual of Horsemanship* (The Pony Club, 2007)
ISBN 9780955337413

Houghton Brown J, Pilliner S and Davies Z – *Horse and Stable Management, 4th edition*
(WileyBlackwell, 2003) ISBN 9781405100079

Rush A – *Your Horse's Health First Aid* (David & Charles Publishers, 2008)
ISBN 9780715327739

Stewart Hastie P – *The BHS Veterinary Manual (British Horse Society)* (Kenilworth Press Ltd, 2006) ISBN 9781872082578

Vogel C – *The Horse's Health Bible: The Quick-Reference Guide to the Diagnosis of Common Veterinary Problems* (David & Charles PLC, 2005) ISBN 9780715321478

Journals

Horse & Hound

Horse & Rider

National Equine Student

Your Horse

Websites

www.bhs.org.uk

www.equisearch.com

www.thehorse.com

Unit 37: Working in a Team

Unit code: R/501/6058

QCF Level: 2

Credit value: 3

Unit aim

In this unit, learners will consider the advantages of team work. Learners will gain knowledge of how to work positively as a team member by contributing to a team task and how to reflect on the performance of a team.

Unit introduction

Team working skills are extremely valuable in the workplace and are also transferable to other areas of life. In this unit, learners will consider the advantages of teamwork and why varied skills and strengths are needed by team members to complete tasks successfully. Learners will gain knowledge of how to work positively as a team member by contributing to a team task. Additionally, learners will understand how to reflect on their own and the team's effectiveness in completing the task. They will consider their individual contribution to the team's performance and areas where the team could improve their teamworking skills.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the advantages and disadvantages of having a team complete a task	1.1 Explain the advantages and disadvantages of having a team complete a task
2 Understand the need for a team to work to an agreed code of conduct	2.1 Identify a code of conduct for effective team work 2.2 Explain the likely consequences of team members not following a code of conduct
3 Be able to recognise the different strengths, skills and experiences different people bring to a team	3.1 Explain their own strengths, skills and experiences, as relevant to a task being undertaken by a team 3.2 Identify some relevant strengths, skills and experiences that other members bring to a particular team

Learning outcomes	Assessment criteria
4 Understand how to allocate roles and responsibilities within the team in relation to a given task	4.1 Agree with other team members the roles and responsibilities of each member of the team 4.2 Explain how each role contributes to the team's objectives and the completion of the team task
5 Work positively as a member of a team	5.1 Describe ways in which respect was shown for the ideas and suggestions of others 5.2 Identify relevant ideas and suggestions which were given and which helped the team to complete their task 5.3 Describe ways in which help, support or advice was given to team members where appropriate 5.4 Explain why it is important to respond positively to advice or constructive criticism 5.5 Complete tasks allocated to the required standard and on time
6 Reflect on the performance of a team	6.1 Discuss how their individual performance contributed to the overall performance of the team 6.2 Outline ways in which the team as a whole performed effectively 6.3 Outline areas in which the team could improve its teamwork skills

Unit content

1 Understand the advantages and disadvantages of having a team complete a task

Advantages of teamwork: employee/learner strengths and weakness can be balanced; team members motivate/encourage/support each other; skills of all members are used; responsibility is shared; team members feel a sense of belonging; individuals feel valued

Disadvantages of teamwork: needs careful planning; takes time to plan and set up; needs agreement or cooperation of all members; task may be better completed by one person; task may require directing by a leader

2 Understand the need for a team to work to an agreed code of conduct

Code of conduct for teamwork: eg every member should contribute; listen to views of all team members; value contributions of others; accept constructive criticism; consult with other team members; make decisions as a group; follow group decisions; carry out agreed responsibilities

Consequences of team members not following code of conduct: team task not completed on time, team task not completed correctly or to appropriate standard, conflict between team members, confusion about individual tasks and responsibilities, team members feel let down, team members feel reluctant or anxious about working or learning with other team members in future

3 Be able to recognise the different strengths, skills and experiences different people bring to a team

Teamwork skills, strengths and experiences: practical skills eg ability to cook, paint, use a computer, good with numbers and money, interpersonal skills eg patient, friendly, enthusiastic, loyal, communication skills eg confident speaker, good listener, motivational skills eg good at encouraging or helping others, organisational skills

4 Understand how to allocate roles and responsibilities within the team in relation to a given task

Agree roles and responsibilities: on the basis of objectives of team task; timescale/deadline for completion; awareness of skills and strengths of all team members; matching skills and strengths of team members to individual tasks eg confident speaker suited to leading verbal presentation, experience in using internet suited to searching for information online

5 Work positively as a member of a team

Respect ideas and suggestions of others: listen politely to ideas and suggestions of others, don't interrupt someone who is explaining their idea or suggestion, thank other team members for their ideas or suggestions

Offer ideas or suggestions for team task: offer ideas on ways to speed up time needed to achieve team task, make suggestions about how to improve quality of the item the team is making

Give help, support or advice to others: offer to help team member who is having difficulty carrying out their task, suggest a better way of doing something, agree to take on an extra task whilst fellow team member is absent

Respond positively to advice or constructive criticism: value of the advice or constructive criticism from others eg creates awareness of personal strengths and weaknesses, creates awareness of quality of work and areas for improvement; maintain positive atmosphere and relationships in the team by responding appropriately to advice or constructive criticism eg listen to the advice offered, don't interrupt the person who is speaking, avoid inappropriate language such as sarcasm, offensive remarks

Complete own task successfully and on time: carry out own task to appropriate standard within agreed timescale eg finished assembling two display boards with correct materials one day before the team presentation date, compared prices for baking ingredients and provided the pricing information to team at the time requested, obtained feedback sheets from customer and reported back to team within two days of the deadline

6 Reflect on the performance of a team

Individual performance as a team member: follow code of conduct, complete individual task appropriately and on time, carry out individual responsibilities, offer help to others, offer feedback or advice to others, contribute to success of whole task

Performance of team: team worked well together, every team member made contribution, team task completed to satisfactory standard, team task completed on time

Essential guidance for tutors

Delivery

The unit has been designed to make the key topics practically based as learners will be participating in a team task.

To develop knowledge and understanding of the advantages and disadvantages of teamwork, guest speakers from colleges, schools, workplaces or other appropriate areas could be invited to speak about their experiences of teamwork. Learners could prepare questions to ask the speakers about the advantages and disadvantages of teamwork for learning outcome 1. In understanding this concept, learners might find it helpful to look at scenarios which give different examples of tasks which are suitable for teamwork and those which are better completed by individuals. Learners in the workplace might find it useful to ask questions of other colleagues regarding the advantages and disadvantages of teamwork or use the internet to find information about the experiences of other people.

Teams and teamwork tasks need to be agreed before considering learning outcomes 2, 3, 4, 5 and 6. Teams could be made up of around four to eight people who have the potential to complete the task that has been set. If the teamwork task is not assigned to an existing team known to the learner, the learner will need some time to get to know the other team members in order to be able to identify their relevant strengths, skills and experiences required for learning outcome 3. Learners could work in their teams to agree tasks which are manageable, achievable and match the skills and interests of the team.

For learning outcome 2, learners should use different methods to agree a code of conduct, for example group discussion, research and investigation. In particular, at this level, they should try to think through what might happen if aspects of the code of conduct were not followed. Learners will probably find it easier to come up with consequences of not following a team code of conduct if they do so in relation to different teamwork scenarios. Appropriate examples of different scenarios could be provided by the tutor or line manager for this purpose. Groups could work to design a poster or presentation which identifies the agreed code of conduct for their own task. The posters or presentations could be displayed in the class or work area for learners to refer to during the rest of the unit.

For learning outcome 4, learners could work in their teams to allocate roles and responsibilities to all team members. Each learner could individually analyse their own contribution to the whole task and report back for the team to agree.

Learners could compile a logbook which could include the agreed roles and responsibilities of all the team. The logbook will help the learner to monitor their performance which is required for learning outcome 5.

For learning outcome 6, learners could discuss both the performance of individuals and that of the team as a whole as part of a group exercise. They could watch recordings of some of their activities and comment on their performance, as well as taking on board the comments of any observers.

Assessment

In order to achieve 1.1, the learner will need to explain three advantages and two disadvantages of teamwork. Practical examples of team work situations could be given to support the explanation.

For 2.1, the code of conduct could be produced in a leaflet or as a poster and could relate to a specific task or group-work in general. The poster or leaflet must include three likely consequences of team members not following the code of conduct for 2.2.

3.1 requires the learner to describe how at least one of their own strengths, skills and experiences are relevant to some aspects of the agreed team task. The learner must identify at least two strengths, skills and experiences of other team members in order to meet 3.2. The evidence for 3.1 and 3.2 needs to be recorded in an appropriate format such as a logbook.

To achieve 4.1, the role played by the learner in agreeing the roles and responsibilities of the team members must be clearly evidenced. An observation record or witness statement could be completed by the tutor/line manager to show that the learner has played an appropriate role in this regard.

For 4.2, the learner must explain how each team member's role contributes to the team's objectives and the completion of the team task. The learner could compile a logbook to record the explanations for 4.2. The logbook could take a variety of formats, depending on the needs of the individual learner.

The evidence required for 5.1, 5.2, 5.3, 5.4 and 5.5 may be included in the logbook completed by the learner during the team task. The logbook will need to be verified by the tutor or line manager. Alternative methods of evidencing may be used for example witness statement or observation.

6.1, 6.2 and 6.3 may be evidenced in group discussion. Responses should be recorded for verification purposes.

Essential resources

Learners will need the opportunity to participate in a teamworking task.

Indicative resource materials

Websites

www.career-advice.monster.com

www.lifecoachexpert.co.uk

www.projectsmart.co.uk/team-building.html

www.worksmart.org.uk/career

Unit 38: Self-Management Skills

Unit code: J/501/6168

QCF Level: 2

Credit value: 2

Unit aim

This will equip learners with an understanding of why self-management in the workplace is important. Learners are asked to demonstrate a range of skills and carry out an evaluation of their performance.

Unit introduction

A proactive approach to self-management is a vital aspect of employability. Employees need to be able to manage themselves appropriately in order to stay safe, healthy and to make a constructive contribution to the workplace.

This unit will equip learners with an understanding of why self-management in the workplace is important and how effective self-management benefits themselves, their colleagues and their employer. Learners are asked to demonstrate a range of self-management skills throughout the working day and carry out an evaluation of their performance, suggesting any areas for improvement.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the importance of managing themselves effectively in the workplace	1.1 Explain how and why they need to manage themselves in the workplace 1.2 Explain how appropriate self-management benefits themselves, their colleagues and their employer
2 Demonstrate effective self-management skills	2.1 Produce a plan for a working day 2.2 Structure appropriate breaks during their working day 2.3 Agree and prioritise work appropriately to achieve their daily objectives
3 Carry out an analysis of their self-management skills	3.1 Analyse their self-management skills 3.2 Suggest areas for improvement

Unit content

1 Understand the importance of managing themselves effectively in the workplace

Importance of managing themselves: contributing to own health and wellbeing, builds self-esteem and confidence, builds better working relationships with peers and other colleagues, appreciated more by others, can perform work more comfortably and easily

How to manage themselves effectively in the workplace: eg taking care of personal wellbeing eg select healthy meal options in canteen at lunchtime to boost physical health, talk to supervisor or human resources representative if feeling anxious about learning new tasks; follow health and safety guidelines eg take regular breaks from looking at computer screen, use correct method for lifting heavy objects; manage time effectively eg check daily tasks lists every morning for any urgent tasks

Benefits of effective self-management to others: for immediate colleagues, other colleagues, the employer eg makes workplace safer, avoids problems related to inappropriate workloads, boosts morale and a positive atmosphere in the workplace, lower rates of absence from work, higher rates of productivity if staff are happy and healthy in their workplace

2 Demonstrate effective self-management skills

Effective self-management skills: plan for a working day including anticipated tasks, time needed for completion, break times; range of skills needed eg time management, understanding of health and safety, keeping themselves and others safe and healthy

3 Carry out an analysis of their self-management skills

Analysis of performance: analysis of plan and performance eg was plan carried out, was there a need to change the plan during the working day, did learner feel safe and comfortable in the workplace

Areas for improvement: discussion of what went well and what did not go so well; suggest areas for improvement eg will ask for help in future if unable to complete a task within the required deadline

Essential guidance for tutors

Delivery

This unit may be delivered in the workplace, in the context of a work placement or volunteering commitment or in a simulated situation in a school or college. It is expected that the self-management skills listed within the unit are those which need to be demonstrated by learners within an educational context as well as by employees. It is likely, therefore, that learners will already be aware of a range of self-management skills in a general context.

Tutors/line managers could use copies of organisational procedures for different types of organisations as appropriate, for example school or college procedures for staff and/or learners relating to self-management (or if in the workplace, copies of procedures for that workplace). Relevant training or developmental courses or exercises relating to self-management (for example time management, 'mock' work tasks and 'in tray exercises', health and safety, personal management) are also useful resources.

Learning outcome 1 could be delivered through group discussion or through discussion between the learner, their line manager, supervisor or another appropriate person familiar to the learner. Tutors/line managers could provide the group or individual learner with prompts and facilitate the discussion to help learners explain how and why it is important to manage themselves in the workplace. Learners should discuss why it is beneficial, to themselves and to others, that they look after themselves in the workplace. Learners could create a poster or leaflet to show their competence in achieving learning outcome 1.

Tutors/line managers may wish to use organisational procedures and health and safety policies as a background to show learners the types of responsibilities employees have to their health and wellbeing, and also the ways in which the workplace can support employees in this.

In preparing a plan for a working day, tutors/line managers may wish to discuss and agree the format of the plan in advance. Tutors/line managers may wish, for example, to provide learners with a template for a plan to fill in, allowing them to record all the essential information.

Learning outcome 2 may be delivered in a variety of ways. If in a work situation, learners could carry out their normal daily activities whilst being observed by their line manager, supervisor or another responsible person. In a simulated situation, learners could be provided with (or agree with their tutor) a scenario which enables them to demonstrate self-management skills within the workplace. However, learners would need an opportunity to demonstrate that they can carry out a range of activities. Tutors/line managers may wish to spend time with learners in preparation for the demonstration, for example carrying out a simulated activity in which the tutor, line manager or other observer provides help or support to the learner by pointing out, for example, health and safety issues that the learner may have missed. They may also discuss and agree the activities which the learner will demonstrate, in advance of the demonstration. Learners must be comfortable with the expectations of the demonstration and the way in which they will be assessed, for example if it is an observation then they should be comfortable with the presence of an observer who may not necessarily offer advice and support during the assessment.

Learning outcome 3 could be delivered through a one-to-one discussion between the tutor or line manager and the learner. Learners and tutors would discuss how the learner fared in their demonstration and learners would have the opportunity to carry out an analysis of their performance. Tutors/line managers may wish to include this analysis as part of any formal reporting (for example appraisal or review sessions during the year).

Assessment

To achieve 1.1, the learner must be able to explain why it is important that they manage themselves in the workplace and provide at least two examples of how they could manage themselves effectively at work. Evidence to support this can be either in a written format, for example records of group or individual discussion (written by the tutor/line manager or by the learner with sign-off from the tutor) or a video or via audio recording.

For 1.2, the learner must be able to explain at least three benefits of effective self-management to others in the workplace, for example benefits to other colleagues and their employer.

To achieve 2.1, the learner should produce a plan for their working day in advance of their demonstration. The plan can be discussed and agreed with the tutor/line manager and can be prepared to a set template, but the information contained within the plan must be from the learner. The plan must include anticipated tasks for that day. To show the learner's understanding of the daily objectives, the plan will show prioritisation of the tasks and some estimation of the time the learner will need to take to complete these. The plan will also allow for break times appropriate to the workplace situation, for example the learner is likely to be spending long periods of time at a computer and so will need to schedule time when they can move away from the computer and rest their eyes.

For 2.2 and 2.3, the learner should demonstrate self-management skills within the workplace. For 2.2, they must be able to show that they can structure appropriate breaks during their working day. In achieving 2.3, the learner will need to prioritise tasks and activities appropriately to meet their daily objectives, although they may wish to discuss them with their tutor or line manager in advance. The tasks and activities should be agreed before the learner undertakes their work. The learner must be able to show that they can perform these skills and understand what they are doing, although tutors and others may support and prompt them.

The demonstration needs to be observed either by the tutor or another person designated to assess the learner (this could be a line manager or supervisor for example). The observation needs to form the basis of a discussion with the learner after the demonstration of their performance. This observation can take the form of a written statement by the tutor or line manager (which would support good practice for appraisal and review in the workplace) or could be a video with supporting commentary from the tutor or line manager.

To achieve 3.1 and 3.2, the learner needs to carry out an analysis of their performance in which they represent their own views on their performance and record them. It is appropriate for the tutor, line manager or colleague to offer constructive criticism and for the learner to include this feedback in their review of the performance if they wish to do so. However, the learner's self-evaluation should represent their own views on their performance and be recorded independently. The learner needs to discuss what they felt went well, (for example being able to get some extra work done due to rescheduling tasks and activities) and what they felt did not go so well (such as being late for a meeting or missing a phone call). The learner must also be able to discuss with their tutor or line manager what they felt they could improve on.

Evidence to support 3.1 and 3.2 can be either written, for example through written statements from the learner on the review of their performance and/or supporting statements from the tutor, line manager or other person involved in the discussion and review, or through video or taped discussion.

Written statements by the learner do not have to be lengthy and can be discussed and agreed by the tutor/line manager and the learner in advance.

Essential resources

There are no essential resources for this unit.

Indicative resource materials

Websites

www.connexions-direct.com

www.direct.gov.uk/en/Employment

www.lifecoachexpert.co.uk

www.monster.co.uk

www.worksmart.org.uk/career

Unit 39: Preparing for an Interview

Unit code: H/501/5917

QCF Level: 2

Credit value: 1

Unit aim

This unit focuses on the role of the learner in correctly anticipating and preparing key information, questions and answers for a potential interview.

Unit introduction

This unit will help learners to develop the skills needed to plan for a successful interview. The unit focuses on the role of the learner in correctly anticipating and preparing key information, questions and answers for a potential interview.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to anticipate key questions that they might be asked at the interview	1.1 Suggest key types of questions that the interviewer might ask
2 Be able to prepare answers to anticipated interview questions	2.1 Prepare appropriate answers to the key questions most likely to be asked by the interviewer
3 Know how to use information about the job/placement/course to identify questions to ask the interviewer	3.1 Find out key information about the employer/organisation/course and explain why it is useful for the interview 3.2 Identify what information they do not have about the job/placement/course which they could request at the interview

Unit content

1 Be able to anticipate key questions that they might be asked at the interview

Key questions: different types of interview questions eg questions about the learner's experience, goals, skills, qualities, suitability for the job/placement/course, why the learner is interested in the course/job/placement, about something specific in the learner's CV, about the learner's knowledge of the course/placement/job for which they are being interviewed

2 Be able to prepare answers to anticipated interview questions

Prepare appropriate answers: formulating answers and reviewing the content for accuracy; relevance and appropriateness to the anticipated questions; appropriateness of language level

Anticipated interview questions: deciding which questions are most likely to be asked by the interviewer based on an understanding of the course/placement/job being applied for eg interview for job at a call centre likely to include questions about people skills and telephone manner, interview for an IT course likely to include questions about qualifications or experience in ICT, maths or technical areas; understanding that not all questions can be predicted

3 Know how to use information about the job/course/placement to identify questions to ask the interviewer

Key information about employer/organisation/course: entry requirements for training course, length of the course, tasks and responsibilities of the job role, qualities and experience needed for the job, what business the company does, what the goals of the organisation are

Use information to identify questions: identifying information about the job/placement/course which they could not find in advance of the interview and could therefore, request from the interviewer eg course materials needed, promotion and training opportunities offered by the organisation, working hours for the placement

Essential guidance for tutors

Delivery

During delivery of this unit, learners should be given as much practical experience as possible. Delivery methods could include learner-centred tasks such as group-work and research tasks, and learner-led presentations.

By combining various aspects of the unit, tutors/line managers should be able to cover all the learning outcomes through practical activities.

The tutor could start delivery of this unit by discussing the purpose of interviews. Similarly, a line manager could discuss with learners (individually or in a group) the purpose of interviews. An understanding of key interview questions could be explored through the use of case studies which provide 'real' interview situations. Learners could work in small groups to explore questions that may be asked, prepare answers and report back to the rest of the group. Learners could be encouraged to use the job description and person specification as a starting point, where appropriate.

Guest speakers may be invited to speak about questions that they ask in different interview situations and the answers they expect. Having learnt the basics, learners should have the opportunity to practise their skills with one other, using role-play. They can then analyse the role-play activities and agree good practice for interviews.

Learners could work in groups to research key information about different employers, organisations or courses related to a specific interview situation using websites, libraries, magazines or other publications. Learners could prepare questions to ask the interviewer and create guidelines which work as a factsheet for other learners to follow.

The interview being prepared for may be for a job, placement or place on a training course. It could be a real situation but a simulated interview is equally acceptable. Whether real or simulated, every effort should be made to provide an interview opportunity that relates directly to the learner's current or intended work or training interests.

Assessment

For 1.1, the learner needs to suggest at least three different types of key interview questions which they could be asked by the interviewer, for example questions about their past experience and skills, questions about why they are interested in the placement or training opportunity, questions about why they want the job, questions about future plans, career goals, hobbies or interests. The tutor may support the learner in thinking about and discussing different types of interview questions, but the three types of questions should be independently selected by the learner.

To achieve 2.1, the learner needs to identify four specific questions they think are most likely to come up at the interview. The questions must be relevant to the stated purpose of the interview. The learner must also be able to give a clear example of an appropriate answer to each of the four questions.

For 3.1, the learner needs to provide key information related to a stated interview, for example what the company or organisation does and what the job role comprises or, for a course, the length of the course, details of any accreditation and any entry requirements. To meet 3.1, the learner must also give a brief but clear explanation about why the information they have found is relevant for their interview, preparation or explain briefly how it will assist them in the interview situation itself.

For 3.2, the learner needs to suggest four relevant questions that they could ask the interviewer about the job, placement or course. The four questions should relate to information that the learner has not already obtained in advance of the interview, for example information about working hours, pay, benefits, training and promotion opportunities, travel requirements, course materials needed.

Essential resources

In order to prepare for an interview, the learner will need a given brief for an appropriate job, placement or place on a training course. They will also require access to sources of additional information about the proposed employer/educational organisation.

Indicative resource materials

Websites

www.direct.gov.uk/en/Employment/Jobseekers/LookingForWork

www.direct.gov.uk/en/YoungPeople/Workandcareers/Gettingyourfirstjob

www.jobcentreplus.gov.uk

www.open.ac.uk/careers/preparing-for-an-interview.php

Unit 40: Interview Skills

Unit code: L/501/5913

QCF Level: 2

Credit value: 1

Unit aim

This unit will help learners develop the skills to undertake an interview. Learners will be also equipped with skills to evaluate their performance after an interview.

Unit introduction

This unit will help learners to develop the skills to undertake an interview, covering both the obvious and less obvious factors in achieving a successful interview. The focus is for the learner to develop a thoroughness of approach to their conduct and interaction with the interviewer, irrespective of the specific interview context. Learners will also be equipped with skills needed to evaluate their performance after an interview, understanding how to use the experience of one interview to prepare constructively for another.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to present themselves appropriately at an interview	1.1 Arrive in good time for the interview and have prepared information about the name or job role/title of the interviewer 1.2 Introduce themselves at the interview location 1.3 Use appropriate means of non-verbal communication such as body language, facial expressions and tone of voice to show interest in the job or course
2 Be able to answer the interviewer's questions appropriately	2.1 Explain the importance of clarifying an interviewer's questions if they are unclear 2.2 Give full responses which provide answers to the questions asked by the interviewer

Learning outcomes	Assessment criteria
3 Reflect on their performance in an interview	3.1 Analyse what went well and what did not 3.2 Suggest ways of improving their performance in a future interview

Unit content

1 Be able to present themselves appropriately at an interview

Arrive in good time and have prepared information about interviewer: the importance of timekeeping in creating the correct impression at an interview; having basic but accurate details about the name/job role/title of the interviewer on hand in case of need

Polite, appropriate way to introduce yourself in an interview situation: use appropriate language and facial expressions, be aware of potential cultural differences around introductions

Appropriate non-verbal communication: the importance of body language, facial expressions and volume/tone of voice in creating the correct impression at an interview; showing that you are interested in what is being said by the interviewer

2 Be able to answer the interviewer's questions appropriately

Clarifying an interviewer's questions if they are unclear: asking politely for unclear questions to be repeated or politely querying unclear questions, eg 'I'm not sure what you mean', 'I don't understand'

Full responses which provide answers to interviewer's questions: thinking about whether the answer is relevant to the question before giving the answer; not including irrelevant information in the answer; giving a full answer by providing all the information asked for, understanding that some questions require more detailed responses than others

3 Reflect on their performance in an interview

What went well and what did not: what went well eg paid attention to all interview questions, was able to answer all questions; what did not go so well eg forgot to ask about materials required for the training course, included irrelevant information in some of the answers

Suggest ways of improving performance in future interviews: learning from a past interview experience to improve performance at a future interview eg arrive at interview a bit earlier in future to eliminate feelings of being rushed and anxious

Essential guidance for tutors

Delivery

A wide range of delivery methods may be used to teach this unit, including tutorials, presentations, videos, worksheets and internet sources. As many practical activities as possible should be included to help learners relate to the unit content.

In order to achieve the learning outcomes for this unit, it would be helpful for learners to gain an understanding of the different types and purposes of interviews. A question and answer session could determine this. Learners could also offer examples of their own interview experiences.

In order for learners to understand the importance of verbal and non-verbal communication in an interview situation, it would be useful for them to watch a video of an interview situation. In groups, learners could discuss and analyse the importance of communication skills and then report back to the rest of the group.

Learners should also have the opportunity to explore cultural differences in non-verbal communication which would be relevant in an interview. Where different cultures and nationalities are represented in the group or learners have experience of other cultures, learners could contribute ideas based on their own experience. Examples could include cultural differences about whether or not to make eye contact with a senior or older person or whether or not to shake someone's hand at the beginning or end of an interview.

Learners could work in small group to prepare interview questions for different interview situations and then take part in roleplay to practise their skills on each other.

For learning outcome 3, learners could work in groups to devise a checklist to use to help them to analyse their performance in an interview. Tutors/line managers could support learners in discussing why some things went well in the interview and why others did not go so well, the role of feedback and the importance of applying it, and dealing with emotions such as stress and nervousness during an interview.

The interview may be for a job, placement or place on a training course. It could be a real situation but a simulated interview is equally acceptable.

Assessment

The learner must have identified in advance where the interview will be held and what route and means of transport they will need to take in order to arrive in time to collect themselves before the interview. To achieve 1.1, they must have found out and recorded information about the name, job title or role of the person who will be interviewing them, and have this information to hand upon arrival for the interview. For 1.2, the learner needs to introduce themselves to the interviewer, either initiating the introductions or in response to the interviewer introducing themselves first.

The learner must be dressed appropriately for the interview context. The definition of 'appropriately' will differ from one workplace or course to another, depending on the nature of the job/placement/course applied for. The learner's appearance needs to be consistent with that normally expected of interviewees in the particular setting. Regardless of setting, the learner should have paid attention to their personal hygiene and be wearing clean clothes.

For 1.3, appropriate body language may include positive facial expressions or tone of voice, shaking hands (if appropriate), sitting once invited to do so, sitting up straight and listening actively. The tutor/line manager should assess the appropriateness of the learner's non-verbal communication in the light of any relevant cultural factors.

The interviewer should ask questions clearly, introducing some fairly complex ideas or situations for the learner to consider, such as asking the learner how they would respond to a particular scenario. The interview should last for around 15 minutes and be conducted by an adult who (if in a college or school context) is not the learner's usual tutor. It would be helpful, though not a requirement, if the interviewer was unfamiliar to the learner.

During the interview, the learner must listen carefully so that they can answer the questions asked (rather than those they would have liked to have been asked or have prepared answers for).

To achieve 2.1, the learner must demonstrate the ability to clarify the interviewer's questions by querying or asking for a question to be repeated during the interview. Alternatively, if no unclear questions arise during the interview, the learner must explain the general importance of clarifying interview questions during their post-interview reflection.

To achieve 2.2, the learner needs to communicate clearly and give answers of reasonable length, avoiding both single word answers and rambling. They should try to paint a positive picture of themselves through their answers.

Evidence to support observation of the learner's performance in the interview could be a written statement by the tutor/line manager/interviewer or could be a video with supporting commentary from the tutor/line manager.

For 3.1, the learner must identify at least two aspects of their performance that went well (for example arriving promptly, wearing the right clothes, being confident enough to ask for a question to be repeated) and one that did not go so well (for example talking too much during the interview, forgetting the interviewer's name, slouching). They must also be able to pick out which questions were answered well and which were not. They may reflect on the interview by watching it back on video or listening to it on a recording, discussing it with the interviewer or other observers. Following these reflections, the learner must record their self-evaluation independently. This could either be written, for example through written statements from the learner on the review of their performance and/or supporting statements from the tutor, line manager or other person involved in the discussion and review, or through video or taped discussion.

To achieve 3.2, the learner needs the opportunity to discuss, with a line manager, tutor or other appropriate person, how they might handle some aspects of the interview differently in future. They may seek the advice of others, but need to identify and record any areas and strategies for improvement independently. The learner must be able to suggest at least one way that they could improve their performance at a future interview.

Essential resources

Learners need the opportunity to participate in a real-life or simulated interview.

Indicative resource materials

Websites

www.direct.gov.uk/en/Employment/Jobseekers/LookingForWork

www.direct.gov.uk/en/YoungPeople/Workandcareers/Workexperienceandvolunteering/DG_066181

www.jobcentreplus.gov.uk/jcp/Customers/outofworkhelplookingforwork/Getting_job_ready/Interviews

www.open.ac.uk/careers/interviews.php

www.worksmart.org.uk/career/interviews

Unit 41: Assist with the Basic Preparation and Operation of a Tractor

Unit code:	A/502/4607
QCF Level:	1
Credit value:	7

Unit aim

The learner will be able to prepare and operate a tractor in varied ground conditions and including the use of trailed and mounted implements. All work will take place in a supervised context and must meet appropriate health and safety requirements. Activities will not take place on public highways.

Unit introduction

The purpose of this unit is to develop learner skills in preparing and operating a tractor. The unit is intended for learners who may never have driven a vehicle before, but who are considering a practical career in the land-based industries. Learners are likely therefore to have no experience with tractors, and tutors need to recognise this when training and assessing.

The range of vehicles and machinery will include various makes of tractors, trailers and appropriate 3-point linkage machines. It is envisaged that PTO-driven machines would be best left out of this unit, so that health and safety standards are maintained.

On completion of this unit, learners should be able to carry out all pre-start tractor checks, attach a trailer (preferably not articulated) and a 3-point linkage machine, and drive them forwards and in reverse.

All current health and safety standards and codes of practice must be adhered to at all times in order to provide learners with a safe working environment.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to assist with the preparation of a tractor for operation	1.1 Carry out pre-start checks and adjustments in accordance with procedures and in line with current and relevant legislation 1.2 Check and adjust operator environment to meet personal requirements 1.3 Fuel tractor ready for day's operation 1.4 Confirm the vehicle is safe and ready for use 1.5 Check the immediate work area for hazards and obstacles and take the appropriate action
2 Be able to operate a tractor	2.1 Check the immediate work area for hazards and take the appropriate action 2.2 Start tractor in line with good practice 2.3 Use the appropriate warning signals 2.4 Conduct all movements of the tractor safely and as instructed 2.5 Modify operating procedures to take into account any changes in weather and ground conditions, and types of terrain 2.6 Deal with any hazards and obstacles encountered during the operation in accordance with standard practice 2.7 Leave the vehicle safe after use and in a condition suitable to its future use 2.8 Carry out all work activities in accordance with health and safety legislation, and codes of practice
3 Be able to prepare and fit an attachment to a tractor	3.1 Confirm suitability of attachment as instructed 3.2 Carry out pre-operational checks on attachments 3.3 Check the immediate work area is suitable for fixing attachments and free from hazards and obstacles 3.4 Fix attachment to tractor in line with instructions and good practice 3.5 Ensure attachment is secure and safe

Learning outcomes	Assessment criteria
4 Operate a tractor with attachments	4.1 Check the immediate work area for hazards and take the appropriate action 4.2 Conduct all movements of the tractor and attachment safely with due consideration to the type of attachment 4.3 Modify operating procedures to take into account any changes in weather and ground conditions, and types of terrain 4.4 Use tractor with attachments safely at all times 4.5 Deal with any hazards and obstacles encountered during the operation in accordance with standard practice 4.6 Report any faults and damage to the appropriate person 4.7 Carry out all work activities in accordance with health and safety legislation, and codes of practice

Unit content

1 Be able to assist with the preparation of a tractor for operation

Preparation: pre-start checks eg oil, water, fuel, battery tyres; check operator environment eg windscreen, adjust seat, mirrors; check fuel eg reservoir if visible, gauge, fill with fuel; check for other hazards, obstacles

2 Be able to operate a tractor

Operate tractor: start procedure eg cold start, clutch pedal dipped, hydraulics down; driving on variable terrain eg slopes, wet, uneven; use of appropriate gears eg low box, drive forwards, drive reverse; brakes eg use of handbrake, independent brakes

3 Be able to prepare and fit an attachment to a tractor

Attachment: check attachment eg type of attachment, hook, drawbar, clevis hitch, 3-point linkage; attachment secure to tractor eg level, central behind tractor, use of stabiliser bars (check-chains), drawbar latched; reason for front weights; area free of hazards

4 Operate a tractor with attachments

Operate tractor and attachment: use of appropriate gears to match terrain; drive with machine in field; weather; use of correct signals; interpret instrument panel and gauges eg warning lights, odometer; field conditions eg adjust machine; use hydraulic levers eg attach pipes, lift trailer, lower trailer; health and safety

Essential guidance for tutors

Delivery

At least one type of tractor is essential, but two or more different tractors would be useful for comparison. Assessments are largely of a practical nature. A practice area away from any farm traffic is ideal in order to provide a safe environment.

Learning outcome 1

Most, if not all, of the delivery is designed to take place using as wide a range of tractors as possible, in order to give learners a wide choice of machines that they will meet on farms. This learning outcome is based on standard pre-start checks that are applicable to all tractors, whatever their age. Instrument panels and controls will of course vary, hence the importance of providing as wide a range as possible for learners to experience. This learning outcome could be delivered inside a workshop. Health and safety must be stressed at all times and risk assessments carried out before work takes place.

Learning outcome 2

This learning outcome is closely linked to learning outcome 1 and is a logical progression. It is designed for learners to become familiar with driving a tractor on its own and with the tractor gears, instruments and signals. The tutor should gauge when learners are confident with the tractor before moving on to learning outcomes 3 and 4.

Learning outcomes 3 and 4

Learning outcomes 3 and 4 are closely linked. A suitable amount of time will be needed for learners to gain confidence and competence in handling a tractor with an attachment. It may be more useful for the tutor to give learners a trailer to attach, before attempting a 3-point linkage implement. Learners can then gain confidence by driving a tractor on flat ground forwards and in reverse safely, before dealing with an attachment (for example discs, rolls, muck spreader) and field conditions. Tutors may find they need more than the specified learning hours in order that learners achieve sufficient competence. Attaching and reversing trailers can take many hours of practice in order to reach assessment level.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Pre-start checks for different tractors; interpret instrument panel; recognise foot and hand controls; fuel tractor; health and safety; mounting and dismounting.
Move tractor; use appropriate gears relative to terrain; drive tractor forwards and reverse; manoeuvre tractor round obstacles; interpret instrument panel on the move; use appropriate signals eg directional, flashing beacon; use independent brakes; health and safety.
Check attachment is suitable for tractor eg front weights; attach machine to tractor; understand different hitches; change drawbar; use hydraulic controls; check for safety.
Move forwards with attachment; use appropriate gears relative to terrain; move forwards and reverse with attachment; remove attachment safely; health and safety.
Use implement in field conditions eg tined cultivator in field, discs, sub-soiler; adjust implement to match field conditions.

Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally relevant practical experiences, with the tasks designed specifically with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would include observation records and/or witness statements. Authenticated photographic evidence is likely to form part of a portfolio of evidence for this unit.

To achieve 1.1, 1.2, 1.3, 1.4 and 1.5, learners will need to show that they can carry out all the pre-start checks as listed in the *Unit content*, as well as interpret any relevant warning lights and know how to use direction indicators. Whilst experience on different tractors is desirable, assessment need only be carried out on **one** type of tractor.

Assessment could be carried out during practical activities.

For safety reasons, learners must undertake this part of the assessment before moving on to the other parts.

To achieve 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7 and 2.8, learners must show that they can start a tractor from cold (for example first thing in the morning) and drive the tractor on its own both forwards and backwards and negotiate corners. It should be at the tutor's discretion whether learners stop and start on slopes due to safety implications. Tutors need to emphasise the correct use of gears. Learners should be discouraged from driving in the high gears.

To achieve 3.1, 3.2, 3.3, 3.4, 3.5, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6 and 4.7, tutors need to identify a suitable attachment for learner assessment. A trailer would probably be the most appropriate as it is relatively safe for this level of learner. Learners need to be assessed attaching a trailer, driving it and reversing it to its parking position.

Once learners are competent with a trailer, tutors may then decide to move on to a simple 3-point linkage implement for attaching purposes without a PTO (for example spring-tined cultivator, dairy scraper, discs, sub-soiler).

All necessary safety and risk assessments must be carried out.

Essential resources

Learners should be given the opportunity to experience as wide a range of tractors as is feasible in order to reflect industry practice. The ideal training area would be on flat ground away from farm traffic, so that practice can take place in a safe environment.

Employer engagement and vocational contexts

Visits to commercial farms where tractors are used will help learners to develop an understanding of the vocational context and future employment possibilities.

Indicative resource materials

Textbooks

Bell B – *Farm Machinery* (Old Pond Publishing, 2008) ISBN 9781903366684

Carroll J – *Tractors: A Visual History* (Lorenz Books, 2000) ISBN 9780754804710

Journals

Farmers Weekly

Profi magazine

Websites

www.fwi.co.uk

www.profi.com

Unit 42: Sport Fisheries

Unit code: M/602/5036

QCF Level: 1

Credit value: 7

Unit aim

This unit gives learners the opportunity to increase practical understanding and to develop the skills required to maintain sport fisheries in order to satisfy diverse groups of anglers, resident fish and conservation aims.

Unit introduction

Sport fishing is a growing activity and there is a high demand for quality sport fisheries. Any open water is also an important conservation habitat and will often have multiple economic and social uses. It is important for anyone working in the management of the countryside to recognise the possibilities for fisheries and how these might be managed in a way that fulfils their potential and is sensitive to the environment and other possible uses for the water.

Learners will gain a knowledge of the needs of the visiting angler, the different types of angling and their suitability for different areas and locations.

This unit concentrates on the routine general maintenance of a sport fishery and the control of aquatic and bankside vegetation. This is practically based unit and will allow learners to develop skills and knowledge around the key areas of fisheries management.

Learning outcomes and assessment criteria

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

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know the needs of anglers and fish	1.1 Identify the practical needs of anglers in a given type of sport fishery 1.2 Identify the physical needs of a given fish species
2 Be able to carry out aquatic and bankside vegetation control	2.1 Identify common trees, aquatic and bankside plants found at a given sport fishery 2.2 Assist in carrying out vegetation control work in a given situation to meet specified objectives 2.3 Assist in planning appropriate methods of aquatic and bankside vegetation control
3 Be able to perform routine sport fishery tasks	3.1 Assist in producing a simple management and maintenance plan for a specified sport fishery to meet given objectives 3.2 Contribute safely to the maintenance of existing facilities at a given sport fishery 3.3 Assist in producing a design for a fishing peg to meet specified objectives
4 Know local and national recreational angling opportunities	4.1 Identify local opportunities for a range of sport fishing activities 4.2 Identify local and national opportunities for a range of participation events in angling

Learning outcomes

On completion of this unit a learner should:

- 1 Know the needs of anglers and fish
- 2 Be able to carry out aquatic and bankside vegetation control
- 3 Be able to perform sport fishery tasks
- 4 Know local and national recreational angling opportunities.

Unit content

1 Know the needs of anglers and fish

Physical characteristics of the sport fishery: location, size, depth, shape, still water, flowing water, water source, topography; types of existing venues eg flowing and still waters, coarse and game, syndicates, day ticket, club waters, venue characteristics, rules

Requirements of anglers: eg access, parking, security, paths, angling stations, fish (species and size), toilets, disabled facilities, tackle and/or bait availability, surroundings, health and safety

Requirements of fish: water quality, space, food, spawning habitat, predators

2 Be able to carry out aquatic and bankside vegetation control

Identify plants: use of keys to identify aquatic and bankside vegetation using keys

Requirements for plant establishment, growth and control: planting and preparing habitat for plants eg depth of water, suitable substrate, nutrition; vegetation control eg manual, biological, chemical; health and safety, relevant legislation

3 Be able to perform routine sport fishery tasks

Possible maintenance and management tasks: daily, weekly and monthly calendar of tasks eg path repair, peg repair, buildings maintenance, stocking, tool repair, boat repair, weed removal, weed control, health and safety, relevant legislation

Contribute to maintenance or repair: repair of paths, pegs, buildings, applying preservatives, strimming, pruning, use of equipment and tools, health and safety issues

Planning and construction: initial design, measuring for materials, costs, supply and construction of fences, paths, angling pegs

4 Know local and national recreational angling opportunities

Different angling opportunities: game and coarse fish, rivers, canals, ponds, lakes, pleasure, specimen, syndicate, club, day ticket, diversity of fish species, size, costs, ticket availability, access; organised events and competitions, local, regional, national

Relevant information resources: eg magazines, internet, tackle shops, local authority, Environment Agency, Angling Trust, English Carp Heritage Organisation (ECHO), club memberships

Essential guidance for tutors

Delivery

Tutors delivering this unit will involve lectures, discussions, seminar presentations, supervised fishery practicals, research using the internet and/or library resources and the use of personal and/or industrial experience would all be suitable. Visiting expert speakers could add to the relevance of the subject for learners. For example, a sport fishery manager or Environment Agency fisheries officer could talk about their work, the situations they face and the methods they use. Learners should be given the opportunity to visit a range of sport fisheries in their locality.

Work placements will be particularly useful in delivering this unit. It would be beneficial if learners and supervisors were made aware of the requirements of this unit prior to any work-related activities so that naturally occurring evidence can be collected at the time. For example, learners may have the opportunity to undertake bankside vegetation control or fishery maintenance and they should be encouraged to ask for observation records and/or witness statements to be provided as evidence of this.

During the delivery of this unit it is essential that tutors stress the importance of sound environment management, animal welfare and the need to manage the resource using legal methods.

Health and safety issues relating to working in and around water must be stressed and regularly reinforced and risk assessments must be undertaken prior to any practical activities. Adequate personal protective equipment (PPE) must be provided and used following the production of suitable risk assessments. Learners undertaking practicals in moving water should be suitably dressed with waders/dry suits and flotation aids. Wading sticks must be used where appropriate. In addition, tutors must ensure that rescue equipment is available on the bankside.

Learning outcome 1 covers the needs of anglers and fish. This is likely to be delivered by formal lectures, independent learner research (using, in particular, the internet books and specialist magazines), learner presentations and discussion and site visits to sport fisheries. It is very important that learners should be encouraged to make use of their own experience, as some are likely to be anglers. Learners should be made aware of the facilities required for and provided by each fishery that they attend. Site visits therefore should be to different types of fishery so learners will be able to make comparisons between them. Learners will develop an understanding of fishery legislation and rules associated with fisheries and why they are required.

Learning outcome 2 focuses on the management of aquatic and bankside vegetation. It aims to give learners knowledge of the typical tasks involved in managing vegetation at sport fisheries. This learning outcome is likely to be delivered by formal lectures, independent learner research (using, in particular, books, the internet and specialist magazines), learner presentations and discussion. Some aspects will be delivered by practical demonstrations and opportunities for learners to attempt some of the techniques. This area is very important and learners should be allowed the opportunity to attempt different methods.

Learning outcome 3 covers the general maintenance and management of various types of sport fisheries. It is expected that formal lectures and discussions will play a part in the delivery of this unit. However, supervised fishery practicals and site visits will form the major part of the delivery of this learning outcome. Building on these practical skills, learners should become

familiar with the roles of the different people employed in the industry. Site visits and talks by guest speakers will be important in allowing learners to discover how a range of skills and duties are needed in different fisheries.

Learning outcome 4 looks at regional and national angling opportunities. This is likely to be delivered in a similar way to learning outcome 1, and any site visits can be used to cover parts of both outcomes. It would be appropriate to give learners the opportunity to experience angling, including those who have not tried it before.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities and/assessment
Introduction and overview of unit.
The physical characteristics of a sport fishery.
Anglers – an introduction to different methods.
The requirements of anglers.
Site visit to two different sport fisheries.
Assignment 1: Angling and fish – Launch assignment
The requirements of fish.
Practical fishing expedition.
Use of keys.
Identification of plants – practical and theory.
Identification of invertebrates – practical and theory.
Identification of vertebrates – practical and theory.
Practical vegetation control.
Requirements of plants: establishment.
Requirements of plants: growth and different methods of control.
Practical vegetation control.
Assignment 2: Fisheries management – Launch.
Assessed practical on vegetation control.
Site visit to fishery (discuss maintenance and management tasks).
Review possible maintenance and management tasks.
Practical – Various maintenance tasks.
Planning and construction – Initial design criteria.

Topic and suggested assignments/activities and/assessment
Review progress with Assignment 2.
Assessed practical on maintenance tasks.
Angling opportunities practical (use internet and magazines to locate local angling venues).
Describe all relevant information sources.
Review different venues for angling.
Organise an event to encourage other college learners to try angling.
Describe the differences between venues.
Assignment 3: Fishing opportunities – Launch.
Individual support.

Assessment

For 1.1 learners are required to identify the practical needs of anglers in a given type of sport fishery. The type of fishery must be agreed in discussion with the tutor. The practical needs should be realistic and complete. Evidence for this could take the form of a written report, presentation with notes, an annotated poster, web page or leaflet.

1.2 requires learners to identify the physical needs of a given fish species. The fish species should be chosen in discussion with the tutor. Consideration must be given to the requirements of the species in relation to water quality, space, food, spawning habitat and protection from predators. It is likely that this will be done in conjunction with 1.1 and the species of fish will be one found in that type of fishery. Evidence for this could take the form of a written report, a presentation with notes, an annotated poster, a web page or a leaflet.

For 2.1 learners are required to identify common trees, aquatic and bankside vegetation at a given sport fishery. It is likely that this will take the form of a field trip to identify flora and fauna in situ, but examples brought into the classroom can be used. It is expected that learners will be able to identify four species from each group. Evidence could be collected with witness statements or using a question and answer session as part of a laboratory practical with log books.

2.2 requires learners to carry out vegetation control work in a given situation to meet specified objectives. The situation and objectives should be agreed in discussion with the tutor. Evidence is likely to be obtained through a supervised practical session and may be collected over a period of time to allow learners to exhibit competence in a range of vegetation control work.

2.3 requires learners to assist in planning appropriate methods of aquatic and bankside vegetation control. It is likely that this criterion will be covered alongside criteria 2.2. Therefore evidence is likely to be obtained through a supervised practical session and may be collected over a period of time to allow learners to discuss a range of vegetation control work.

For 3.1 learners are required to assist in producing a simple management and maintenance plan for a specified sport fishery to meet given objectives. The sport fishery and objectives should be agreed in discussion with the tutor. The plans should be complete, wide ranging and realistic. Evidence for this could take the form of a written report, a presentation with notes, an annotated poster, a web page or a leaflet. These plans should, as far as possible, lead into criterion 3.2, which requires learners to safely contribute to the maintenance of existing facilities at a given sport fishery. This means that the learner will indicate in the plan what

maintenance work is required and will then carry it out. Evidence is likely to be obtained through a supervised practical session and may be collected over a period of time to allow learners to contribute to a range of routine management work.

3.3 requires learners to assist in producing a design for a fishing peg to meet specified objectives. The objectives should be agreed in discussion with the tutor. Evidence could take the form of a written report or work schedule.

In 4.1 learners are required to identify local opportunities for a range of sport fishing activities. Learners should identify at least 12 different opportunities with at least one representative of a game and coarse fishery, river, canal, pond, lake, pleasure, specimen, syndicate, club and day ticket, where possible. Evidence for this could take the form of a written report, a presentation with notes, an annotated poster, a web page or a leaflet.

4.2 requires learners to identify local and national opportunities for a range of participation events in angling. Learners should identify at least six different opportunities with a range of different opportunities. Evidence for this could take the form of a written report, a presentation with notes, an annotated poster, a web page or a leaflet.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the assessment criteria. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1 and 1.2	Angling and Fish	<p>You are considering taking over a lake to turn into a fishery. In order to decide, you will need to identify the practical needs of anglers and how you will fulfil these at the new fishery.</p> <p>You will also need to identify the physical needs of a given species of fish present in the lake.</p>	Written report.
2.1, 2.2, 2.3, 3.1, 3.2 and 3.3	Fisheries Management	<p>You have just taken a job at a sport fishery. The first task they set you is to draw up a management and maintenance plan to keep the fishery in good order for the coming season.</p> <p>Vegetation control will be an important part of the maintenance plan, so you must identify the major species of trees, bankside plants and aquatic plants present at the fishery. Use this identification as a basis to lay out possible control methods and select the most appropriate for the situation.</p>	Written report and practical assessment.

Criteria covered	Assignment title	Scenario	Assessment method
		Using this plan, contribute to the maintenance programme of the fishery and the vegetation control work that you have selected. Some of the angling platforms require upgrading. As part of the plan design a suitable fishing peg for this fishery.	
4.1 and 4.2	Fishing Opportunities	Some of your classmates want to start fishing. Produce a poster which details the different opportunities available in the local area. Include a map and locations and some details of what you may expect at each fishery. Also include a list of angling events that are occurring which might attract anglers to particular venues.	Poster

Essential resources

Site visits should be encouraged and learners will need access to a range of fisheries in different locations, including, for example, offline and online lakes, gravel pits, clay lakes, rivers, canals and reservoirs. This will enable learners to see management practices, vegetation control techniques and the facilities available at fisheries. It would be appropriate to facilitate fishing for learners at a range of different fisheries. Access to hand tools to undertake practical management work is essential.

Tutors delivering this unit should be competent and experienced sport fishery managers.

Indicative reading for learners

Textbooks

Baldwin C et al – *Management of Carp Fisheries* (Mitchellwing Publications, 2001)
ISBN 9780954005405

Giller P and Malmqvist B – *The Biology of Streams and Rivers* (Oxford University Press, 1998)
ISBN 9780198549772

Girdler A, Welcomme R and Wellby I – *Fisheries Management: A Manual for Still-Water Coarse Fisheries* (Wiley-Blackwell, 2010) ISBN 9781405133326

Harding P (editor) – *Freshwater Fishes in Britain: The Species and Their Distribution* (Harley Books, 2004) ISBN 9780946589760

Holmes N, Ward D and Jose P – *The New Rivers and Wildlife Handbook* (The Royal Society for the Protection of Birds, 2001) ISBN 9780903138703

Seagrave C – *Aquatic Weed Control* (Wiley-Blackwell, 1989) ISBN 9780852381526

Templeton R G (editor) – *Freshwater Fisheries Management, 2nd Edition* (Wiley-Blackwell, 1995) ISBN 9780852382097

Journals*Anglers' Mail**Angling Times**Annual Assessment of Salmon Stocks and Fisheries in England and Wales (CEFAS and the EA)**Gamefisher (The Salmon and Trout Association magazine)***Websites**www.anglingtrust.net

Angling Trust

www.atlanticsalmontrust.org

Atlantic Salmon Trust

www.environment-agency.gov.uk

Environment Agency

www.gwct.org.uk

Game and Wildlife Conservation Trust

www.graylingsociety.org

Grayling Society

www.hse.gov.uk

Health and Safety Executive

www.ifm.org.uk

Institute of Fisheries Management

www.salmon-trout.org

Salmon and Trout Association

www.wildtrout.org

The Wild Trout Trust

Unit 43: Water and Fish

Unit code: T/602/5037

QCF Level 1: BTEC

Credit value: 7

Unit aim

The aim of this unit is to allow learners to investigate the aquatic environment and develop knowledge of a range of plants, animals and fish that live in and around water and how they interact with each other.

Unit introduction

It is essential for many people working within the land-based industries to have an understanding of water and the fish that live in it. Freshwater habitats are an important part of the environment in the UK, not only as fisheries but also for many other forms of recreation, and they are vital in terms of conservation. This unit aims to give an introduction to the complexity of the aquatic environment and the multitude of fascinating creatures that live in this environment.

Learners will investigate the external features of aquatic plants and animals. These investigations will help learners to correctly identify these plants and animals and the roles these organisms play in the aquatic environment. Other parts of the unit will allow learners to investigate the principal characteristics of water, in particular the water (hydrological) cycle and the particular physical and chemical characteristics of water. Practical elements allow learners to measure some of these characteristics and compare different aquatic habitats and the impact that these differences have on the type of organisms found there. The final part of the unit covers the fish that live in this environment. Learners will cover the major external features of fish and how to identify different species. Learners will then go on to investigate the needs of these fish and how these requirements vary for different species.

The aquatic environment can be dangerous to work in. Safe working practices, health and safety policies and the need for Personal Protective Equipment will be stressed throughout this unit in order to allow learners to develop a safe, confident and adaptable approach to working in this environment.

Learning outcomes and assessment criteria

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

On completion of this unit learners should:

Learning outcomes	Assessment criteria
1 Know common aquatic flora and fauna	1.1 Identify flora and fauna in an aquatic environment 1.2 Describe the life cycles of given aquatic flora and fauna
2 Know the principal characteristics of water	2.1 Outline the water cycle 2.2 Collect water samples from a given freshwater habitat in a safe manner 2.3 Analyse water properties of a given aquatic environment
3 Be able to compare different common aquatic environments	3.1 Contribute to the safe collection of aquatic invertebrates from flowing or still water 3.2 Report the differences in aquatic flora and invertebrates found in contrasting aquatic environments
4 Know common fish species and their principal requirements	4.1 Identify common saltwater, coarse and salmonid fish 4.2 Identify the external and internal features of a named fish species 4.3 Describe the principal needs of a given fish species

Learning outcomes

On completion of this unit a learner should:

- 1 Know common aquatic flora and fauna
- 2 Know the principal characteristics of water
- 3 Be able to compare different common aquatic environments
- 4 Know common fish species and their principal requirements.

Unit content

1 Know common aquatic flora and fauna

Flora and fauna: use of keys; identification of use of simple keys; range of common species

Role of flora and fauna: food webs; nutrient cycling; role of plants, fish and invertebrates in a water body

Life cycle of flora and fauna: perennial, annual and biennial plants; flowering; seed dispersal, reproduction and life cycles of fish, invertebrates and mammals

Seasonal changes: changes in species diversity and abundance; influence of seasons and weather on communities

2 Know the principal characteristics of water

Water cycle: to include evaporation, forms of precipitation, run off, groundwater; changes to water chemistry; influences on the water cycle both natural and man-made eg reservoirs, abstraction, discharges, land use, buildings

Properties: chemical composition of water, hydrogen bonds, specific heat capacity, water as a solvent, cohesive properties of water; fresh, brackish and salt water environments; daily and seasonal variations in natural water bodies

Measure and record: pH, dissolved oxygen, temperature

3 Be able to compare different common aquatic environments

Aquatic environments: still and moving fresh waters, brackish waters, salt water; flora and fauna communities; species tolerances

Methods of data collection: measuring physical properties eg size, flow and shape; fauna and flora species and abundance; methods of collecting and identifying flora and fauna; health and safety

Natural and man-made influences: effects of urban and rural activities; effects of natural environment, rainfall, topography

4 Know common fish species and their principal requirements

Fish species: use of keys, salmonids, coarse and saltwater fish

Internal and external features: gill cover; fins; eyes; vent; nostril; gills; swim bladder; lateral line; heart; kidneys; liver and digestive system

Needs of fish: sources of food (natural or artificial); habitat; spawning substrate; room for growth; protection from predators; correct water quality

Essential guidance for tutors

Delivery

This unit is intended to give the learner an understanding of the diversity of water bodies and the characteristics of aquatic environments. There are opportunities to investigate the roles of plants and animals and to identify changes brought about by the seasons. The practical element of this unit is very important with opportunities for collecting flora and fauna, along with water testing and data collection. There is also an ideal opportunity for raising awareness of environmental problems, possible local issues and the link between these and national or global problems. In learning outcome 4 learners are given the opportunity to investigate a particular group of animals, fish, in much more detail.

Health and safety issues relating to working in and around water must be stressed and regularly reinforced and risk assessments must be undertaken prior to any practical activities. Adequate personal protective equipment (PPE) must be provided and used following the production of suitable risk assessments. Learners undertaking practicals in moving water should be suitably dressed with waders/dry suits and flotation aids. Wading sticks must be used where appropriate. In addition, tutors must ensure that rescue equipment is available on the bankside.

Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities and/assessment
Introduction and overview of unit.
Flora and fauna – introduction.
Types and life cycles of aquatic flora and fauna.
Use of identification keys.
Practical: Familiarization with and identification of flora and fauna.
Introduction to fish – how they live, different types, etc.
Role of flora and fauna.
Assignment 1: Fish – Launch assignment.
Food chains and webs, nutrient cycling.
Changes – seasonal.
Changes – weather.
Water – key characteristics (including practical – surface tension etc).
The hydrological (water) cycle.

Topic and suggested assignments/activities and/assessment
Assignment 2: The Water Cycle – Launch.
Chemical properties of water.
Practical: Taking water samples in a safe and appropriate manner.
Practical: Measure and record water parameters.
Aquatic environment – types and descriptions.
Site visit – various different aquatic habitat types.
Fish – external features.
Fish – internal features.
Methods of sampling flora and fauna.
Identification of flora.
Assignment 3: Aquatic Sampling – Launch assignment.
Practical: Sampling and identification of invertebrates.
The needs of a fish.
Fish identification.
Practical: Simple fish dissection.
Assessed practical: Collect data required for Assignment 1.
Influences on the aquatic environment.
Importance of the aquatic environment – discussion.
Assignment 4: Fish Dissection – Assessed practical.
Individual support

Assessment

For 1.1 learners will be expected to identify flora and fauna in an aquatic environment. This may take the form of a field trip to identify flora and fauna in situ or using examples brought into the classroom. Learners will be expected to correctly identify at least five plants and five animals. Evidence for this is likely to be in the form of witness statement and a pictorial notebook. However, learners could gather the evidence using notes, an annotated poster, a web page or a leaflet.

For 1.2 learners are expected to describe the life cycles of given aquatic flora and fauna. Learners should describe life cycles for at least two plants and two animals. These examples could be chosen from the correctly identified specimens for criterion 1.1 or should be agreed in discussion with the tutor. Evidence for this could take the form of a pictorial presentation with notes, an annotated poster, a web page or a leaflet.

2.1 requires the learners to outline the water cycle. Learners will be expected to mention the key elements of the water cycle, as a minimum correctly including evaporation, forms of precipitation, run off and groundwater and explain how these elements fit together to make a cycle. Evidence for this could take the form of a pictorial presentation with notes, an annotated poster, a web page or a leaflet.

For 2.2 learners are required to collect water samples from a given freshwater habitat. This is likely to be performed during a supervised practical visit, as safe working practices require samples to be collected in pairs or by small teams, not individually. The water samples should be collected by an industry recognised method.

It is highly likely that this criterion will be combined with 2.3, which requires learners to analyse properties of a given aquatic environment. The water should be analysed using industry recognised methods and the measurements should as a minimum include pH, temperature and dissolved oxygen. Evidence for this could take the form of a site practical and laboratory session with a written report, although some areas could be assessed directly by the tutor during practical activities. Comparisons could be made against a set of standard data for a similar water course.

3.1 requires learners to contribute to the safe collection of aquatic invertebrates from flowing or still water. The type of water should be decided in discussion with the tutor and the methods used should follow an industry recognised standard. Evidence for this could take the form of an assessed practical with pictorial presentation or an annotated poster.

For 3.2 learners are asked to report the differences in aquatic flora and invertebrates found in contrasting aquatic environments. These contrasting environments should be chosen in discussion with the tutor but an obvious example would be between flowing water and still water. The differences identified and reported should be realistic and pertinent. Evidence for this could take the form of a pictorial presentation with notes, an annotated poster, a web page or a leaflet.

4.1 requires learners to identify common saltwater, coarse and salmonid fish. It is expected that learners should be able to identify 15 different species. This exercise could be completed using live specimens, collected dead specimens and good quality pictorial presentations. Evidence could be collected over time and with witness statements or using a question and answer session as part of a laboratory practical with log books.

For 4.2 learners are required to identify external and internal features of a named fish species. External features identified must include gill cover, fins, eyes, vent, nostril, gills and lateral line. Internal features identified must include swim bladder, heart, kidneys, liver and digestive system. Evidence could be in the form of a laboratory report or possibly assessed directly by observation during a simple dissection. The fish species should be chosen in discussion with the tutor but should be one familiar to the learner and consistent with the learner's goal. Evidence could be gathered in the same manner as for 4.1.

4.3 requires learners to describe the principal needs of a given fish species. The fish species should be chosen in consultation with the tutor, and should be one of particular interest to the learner. The investigation should include as a minimum food source, habitat requirements, spawning, water quality requirements and predation.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the assessment criteria. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
4.3	Fish	You are required to investigate a particular fish species and provide a report on that species for presentation to your fellow learners. Your report should include information on feeding, normal habitat and water quality requirements, spawning and fry and possible predators.	PowerPoint presentation, poster or leaflet.
2.1	The Water Cycle	Illustrate the water cycle. The illustration must correctly include evaporation, forms of precipitation, run off and groundwater movement.	Written and visual presentation.
1.1, 1.2, 2.2, 2.3, 3.1, 3.2.	Aquatic Sampling	<p>You have been asked to describe a water course in detail. To do this you need to describe how you would collect invertebrates from the chosen water course and take water samples for analysis. During a practical session you will need to contribute to the collection of invertebrates following the protocol you have chosen. Also collect water samples at this time. All sampling must be done in a safe manner. Identify and map the five major species of aquatic and bankside plants at the location.</p> <p>Identify the invertebrates you have collected and give details of the lifecycles of at least two of these.</p> <p>Measure and accurately record the pH, temperature and dissolved oxygen of the water sample.</p> <p>You are also asked to list the differences you would expect to see between the sample you have just collected and samples collected from a different water source (eg a river or lake).</p>	Assessed practical with written report.

Criteria covered	Assignment title	Scenario	Assessment method
4.1 and 4.2	Fish dissection	<p>You are presented with a freshly dead fish. You must identify the species. You must examine the fish and record all the following external features: gill cover, all fins, eyes, vent, nostril, gills and lateral line.</p> <p>Once dissected the specimen should be photographed and the following internal organs must be correctly labelled: swim bladder, heart, kidneys, liver and digestive system.</p> <p>During this practical you will be presented with 18 other species of fish which you must correctly identify.</p> <p>NB: If for any reason a dissection of a freshly dead fish is not appropriate, fully annotated good quality pictures are acceptable.</p>	Lab report, verbal report and written report.

Essential resources

Access to a range of suitable aquatic environments and related sampling, measuring and identification equipment is essential, along with appropriate levels of supervision available to support learning. Transport for visits to different environments will be required to ensure learners appreciate the range of aquatic environments (locally and/or nationally). A range of texts, journals, magazines, CD ROMs and videos should be available. Access to IT and the internet is essential. Learners must have access to, and use, appropriate personal protective equipment (PPE).

Indicative reading for learners

Textbooks

Croft P – *A Key to the Major Groups of British Freshwater Invertebrates* (Field Studies Council, 1986) ISBN 9781851531813

Girdler A, Welcomme R and Wellby I – *Fisheries Management: A Manual for Still-Water Coarse Fisheries* (Wiley-Blackwell, 2010) ISBN 9781405133326

Greenhalgh M and Ovenden D – *Collins Pocket Guide: Freshwater Life* (Collins, 2007) ISBN 9780007177776

Harding P (editor) – *Freshwater Fishes in Britain: Their Species and Distribution* (Harley Books, 2004) ISBN 9780946589760

Maitland P S – *The Biology of Freshwaters (Tertiary Level Biology), 2nd Edition* (Kluwer Academic Publishers, 1994) ISBN 9780751402797

Olsen L H, Pedersen B V and Sunesen J – *Small Freshwater Creatures (National History Pocket Guides)* (Oxford University Press, 2001) ISBN 9780198507987

Preston C D and Croft J M – *Aquatic Plants in Britain and Ireland* (Harley Books, 2001) ISBN 9780946589692

Wheeler A – *Field Key to the Freshwater Fishes and Lamprey of the British Isles (Journal Offprints)* (AIDGAP for the Field Studies Council, 1998) ISBN 9781851532261

Websites

www.btcv.org.uk

BTCV

www.environment-agency.gov.uk

Environment Agency

www.fba.org.uk

Freshwater Biological Association

www.freshwaterlife.org

Freshwater Life

www.lifeinfreshwater.org.uk

Life in Freshwater – The Field Studies Council

Further information

For further information please call Customer Services on 0844 576 0026 (calls may be recorded for training purposes) or visit our website (www.edexcel.com).

Useful publications

Further copies of this document and related publications can be obtained from:

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Email: publication.orders@edexcel.com

Related information and publications include:

- Guidance for Centres Offering Edexcel/BTEC QCF Accredited Programmes (Edexcel, distributed to centres annually)
- Functional Skills publications – specifications, tutor support materials and question papers
- Regulatory Arrangements for the Qualification and Credit Framework (Ofqual, August 2008)
- the current Edexcel publications catalogue and update catalogue.

Edexcel publications concerning the Quality Assurance System and the internal and external verification of vocationally related programmes can be found on the Edexcel website and in the Edexcel publications catalogue.

NB: Most of our publications are priced. There is also a charge for postage and packing. Please check the cost when you order.

How to obtain National Occupational Standards

Lantra
Lantra House
Stoneleigh Park
Coventry
Warwickshire CV8 2LG

Telephone: 0845 707 8007
Email: connect@lantra.co.uk

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Edexcel supports UK and international customers with training related to BTEC qualifications. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

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- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building Functional Skills into your programme
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The national programme of training we offer can be viewed on our website (www.edexcel.com/training). You can request customised training through the website or by contacting one of our advisers in the Training from Edexcel team via Customer Services to discuss your training needs.

Our customer service numbers are:

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GCSE	0844 576 0027
GCE	0844 576 0025
The Diploma	0844 576 0028
DiDA and other qualifications	0844 576 0031

Calls may be recorded for training purposes.

The training we provide:

- is active – ideas are developed and applied
- is designed to be supportive and thought provoking
- builds on best practice.

Our training is underpinned by the LLUK standards for those preparing to teach and for those seeking evidence for their continuing professional development.

Annexe A

The Edexcel/BTEC qualification framework for the Land-based sector

Progression opportunities within the framework.

QCF Level	General qualifications	BTEC full vocationally-related qualifications	BTEC Short Courses	NVQ/occupational
4		Higher National Certificates/Diplomas in Agriculture, Animal Management, Environmental Conservation, Equine Management, Horticulture		
3	Diploma: Principal Learning in Environment and Land-based Studies	National Awards/Certificates/Diplomas in Agriculture, Animal Management, Blacksmithing and Metalwork, Countryside Management, Fish Management, Floristry, Forestry and Arboriculture, Horse Management, Horticulture, Land-based Technology	Award in Diagnosing Faults in Land-based Machines	NVQ Environmental Conservation
2	Diploma: Principal Learning in Environment and Land-based Studies	First Award/Certificate/Diploma in Agriculture, Animal Care, Countryside and Environment, Fish Husbandry, Floristry, Horse Care, Horticulture, Land-based Technology		NVQ Environmental Conservation
1		Award/Certificate/Diploma in Land-based Studies (QCF) Award in Preparation and Operation of a Tractor (QCF)		
Entry		Award in Land-based Studies (Entry 3) (QCF) Award in Care of Farm Animals (Entry 3) (QCF)		

Annexe B

Wider curriculum mapping

Study of the Edexcel BTEC Entry Level (Entry 3) (QCF) and Edexcel BTEC Level 1 (QCF) qualifications gives learners opportunities to develop an understanding of spiritual, moral, ethical, social and cultural issues as well as an awareness of citizenship, environmental issues, European developments, health and safety considerations and equal opportunities issues.

Spiritual, moral, ethical, social and cultural issues

Throughout the delivery of these qualifications learners will have the opportunity to actively participate in different kinds of decision making. They will have to consider fair and unfair situations and explore how to resolve conflict. Working in small groups they will learn how to respect and value others' beliefs, backgrounds and traditions.

Citizenship issues

Learners undertaking these qualifications will have the opportunity to develop their understanding of citizenship issues.

Environmental issues

Developing a responsible attitude towards the care of the environment is an integral part of this qualification. Learners are encouraged to minimise waste and discuss controversial issues.

European developments

Much of the content of the qualification applies throughout Europe, even though the delivery is in a UK context.

Health and safety considerations

Health and safety is embedded within many of the units in this qualification. Learners will consider their own health and safety at work, how to identify risks and hazards and how to minimise those risks.

Equal opportunities issues

There will be opportunities throughout this qualification to explore different kinds of rights and how these affect both individuals and communities, for example learners will consider their rights at work and the rights of employers and how these rights affect the work community.

Annexe C

National Occupational Standards/mapping with NVQs

The grid below maps the knowledge covered in the Edexcel BTEC Level 1 (QCF) qualifications in Land-based Studies against the underpinning knowledge of the Level 1 NVQs in Agriculture, Land-based Operations, Animal Care, Horticulture and Horse Care, SSC National Occupational Standards.

KEY

indicates partial coverage of the NVQ unit

a blank space indicates no coverage of the underpinning knowledge

NVQs	Units																							
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	41	
Level 1 NVQ in Agriculture	#	#	#	#	#	#	#																	#
Level 1 NVQ in Land-based Operations	#	#	#	#																				#
Level 1 NVQ in Animal Care	#	#	#					#	#	#														
Level 1 NVQ in Horticulture	#	#									#		#	#	#	#	#	#	#					
Level 1 NVQ in Horse Care	#	#																		#	#	#	#	

Annexe D

Edexcel Entry Level Skills for Working Life (Land Based) legacy
(certification end date 31/08/2010)/Edexcel BTEC Entry Level in Land-based Studies new (Entry 3) (QCF) (accreditation start date 01/09/2009) -
unit mapping overview

Old units New units	Small Animal Care (Entry 3)	Growing Plants (Entry 3)
Unit 1		P
Unit 2		
Unit 3		
Unit 4		P
Unit 5		
Unit 6	P	
Unit 7	P	
Unit 8	P	
Unit 9		
Unit 10		
Unit 11		

KEY

P – Partial mapping (some topics from the old unit appear in the new unit)

F – Full mapping (topics in old unit match new unit exactly or almost exactly)

X – Full mapping + new (all the topics from the old unit appear in the new unit, but new unit also contains new topic(s))

BTEC Introductory in Land and Environment legacy (certification end date 31/08/2010)/Edexcel BTEC Level 1 in Land-based Studies (QCF) new (accreditation start date 01/09/2009) - unit mapping in depth

New units		Old units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
Unit 15	Maintain the Safety of Self and Others in the Workplace	Unit 2	Working Safely in the Land-based Industries	Statutory regulations; health and safety training; health and safety procedures. <i>Identification of hazards; selection of PPE; minimising environmental damage; cleaning and storage of tools and equipment.</i>
Unit 16	Assist with the Maintenance of Equipment			
Unit 17	Assist with the Care of Animals	Unit 8 Unit 19	Animal Husbandry Caring for Small Animals	Monitoring health; providing food and water.
Unit 18	Assist with the Movement of Animals	Unit 8	Animal Husbandry	Handling and restraining. <i>Loading and unloading for transport.</i>
Unit 19	Assist with Preparing and Maintaining Livestock Accommodation	Unit 8	Animal Husbandry	Maintenance of accommodation.
Unit 20	Assist with Preparation and the Monitoring of Livestock Outdoors	Unit 8	Animal Husbandry	Requirements of outdoor sites.
Unit 21	Farm Animal Health	Unit 8	Animal Husbandry	Signs of good and ill health; assisting with treatment. <i>Farm animal identification and record keeping.</i>
Unit 22	Assist with Feedstuffs for Small Animals	Unit 19	Caring for Small Animals	Feeding small animals. <i>Storage of animal feed.</i>

New units		Old units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
Unit 23	Assist with Animal Accommodation	Unit 19	Caring for Small Animals	Maintaining accommodation.
Unit 24	Assist with the Movement and Handling of Small Animals	Unit 19	Caring for Small Animals	Handling small animals.
Unit 25	Assist with the Maintenance of Grass Surfaces			
Unit 26	Soil Identification and Testing	Unit 7	Plants and Soil	Tests; how to modify. <i>Plant preferences for different types of soil.</i>
Unit 27	Assist with Planting and Establishing Plants	Unit 12	Horticulture	Planting and establishing.
Unit 28	Assist with Maintaining Plants	Unit 12	Horticulture	Maintenance.
Unit 29	Assist with the Vegetative Propagation of Plants			
Unit 30	Assist with the Propagation of Plants from Seed	Unit 12	Horticulture	Seed sowing and aftercare.
Unit 31	Assist with Identifying the Presence of, and Controlling Common Pests and Diseases	Unit 12	Horticulture	Identifying pest and disease problems. <i>Cultural or biological controls.</i>
Unit 32	Prepare and Plant a Container for Display	Unit 12	Horticulture	Planting. <i>Selection of suitable container and plants; design of display.</i>
Unit 33	Planting and Staking a Tree	Unit 12	Horticulture	Tree planting.
Unit 34	Assist with Feeding and Watering Horses	Unit 11	Horse Husbandry	Provision of feed and water.

New units		Old units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
Unit 35	Assist with the Preparation for Exercise and Aftercare of Horses	Unit 11	Horse Husbandry	Stable maintenance; grooming; horse clothing; tack.
Unit 36	Exercise Horses under Supervision			
Unit 41	Assist with the Basic Preparation and Operation of a Tractor	Unit 9	Land-based Machinery Operation	Pre-start checks, operation, health and safety and attachments for tractors.
Unit 42	Sport Fisheries	Unit 13	Sport Fisheries	All topics
Unit 43	Water and Fish	Unit 16	Water and Fish	All topics

Annexe E

Mapping to Functional Skills

Entry 3	Unit number													
English - Speaking and listening	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Respond appropriately to others and make more extended contributions in familiar formal and informal discussions/exchanges	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
English - Reading														
Independently read and understand straightforward texts for a purpose									✓					
English - Writing														
Write documents with some adaptation to the intended audience									✓			✓		

Entry 3	Unit number													
Mathematics - Learners can	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Understand practical problems in familiar and accessible context and situations	✓	✓	✓						✓			✓		✓
Begin to develop own strategies for solving simple problems	✓	✓	✓						✓			✓		✓
Select and apply mathematics to obtain answers to simple given practical problems that are clear and routine	✓	✓	✓											✓
Interpret and communicate solutions to practical problems in familiar contexts and situations	✓	✓	✓											✓
Use simple checking procedures	✓	✓	✓											✓

Entry 3	Unit number													
ICT - Use ICT systems	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Interact with and use an ICT system to meet needs									✓			✓		
Store information									✓			✓		
Follow and understand the need for safety and security practices									✓			✓		
ICT - Find and select information														
Select and use appropriate sources of information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Use ICT to search for and select information that matches given requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓
ICT - Develop, present and communicate information														
Enter and develop information to meet needs, in the form of text, images and number											✓		✓	✓
Bring together information to achieve a purpose									✓	✓		✓	✓	
Present information and review its effectiveness										✓		✓	✓	
Select and use ICT to communicate												✓	✓	

Level 1		Unit number																													
English - Speaking and listening		15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
Take part in formal and informal discussions/exchanges	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
English - Reading																															
Read and understand a range of texts	✓																									✓				✓	
English - Writing																															
Write documents with which to communicate information, ideas and opinions using formats and styles suitable for their purpose and audience	✓																								✓	✓					

Level 1	Unit number																													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
Mathematics - Learners can	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Understand practical problems in familiar and unfamiliar contexts and situations, some of which are non routine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Identify and obtain necessary information to tackle the problem	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Select and apply mathematics in an organised way to find solutions to practical problems for different purposes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Use appropriate checking procedures at each stage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Interpret and communicate solutions to practical problems, drawing simple conclusions and giving explanations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Level 1	Unit number																													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
ICT - Use ICT systems																														
Interact with and use an ICT systems independently to meet needs																										✓				
Use ICT to plan work and evaluate their use of ICT systems																										✓				
Manage information storage																										✓				
Follow and understand the need for safety and security practices																										✓				

Level 1	Unit number																														
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43		
ICT - Find and select information	✓	✓																							✓	✓					
Select and use a variety of sources of information independently to meet needs																										✓					
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	✓	✓																							✓	✓					
ICT - Develop, present and communicate information																															
Enter, develop and format information to suit its meaning, and purpose including: text and tables, images, numbers, graphs, records												✓													✓						
Bring together information to suit content and purpose	✓											✓												✓	✓						
Present information in ways that are fit for purpose and audience	✓											✓												✓	✓						
Evaluate the selection and use of ICT tools and facilities used to present information													✓											✓	✓	✓					
Select and use ICT to communicate and exchange information safely, independently, responsibly and effectively																								✓	✓	✓					

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