



Specification

BTEC Firsts

**Pearson BTEC Level 2 Certificate, BTEC Level 2
Extended Certificate and BTEC Level 2 Diploma in
Animal Care**

For first teaching September 2010

June 2016

Issue 2

Edexcel, BTEC and LCCI qualifications

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This specification is Issue 2. Key changes are sidelined. We will inform centres of any changes to this issue. The latest issue can be found on our website at qualifications.pearson.com

These qualifications were previously entitled:

Edexcel BTEC Level 2 Certificate in Animal Care (QCF0)

Edexcel BTEC Level 2 Extended Certificate in Animal Care (QCF)

Edexcel BTEC Level 2 Diploma in Animal Care (QCF)

The QNs remain the same.

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All information in this specification is correct at time of publication.

ISBN 978 1 446 93525 5

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BTEC First qualification titles covered by this specification

Pearson BTEC Level 2 Certificate in Animal Care

Pearson BTEC Level 2 Extended Certificate in Animal Care

Pearson BTEC Level 2 Diploma in Animal Care

These qualifications have been accredited to the Regulated framework and are eligible for public funding as determined by the Department for Education (DfE) 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 DfE and their regularly updated website. The Qualifications Number (QN) should be used by centres when they wish to seek public funding for their learners. Each unit within a qualification will also have a unit code.

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

The QANs for the qualifications in this publication are:

Pearson BTEC Level 2 Certificate in Animal Care	500/8332/6
Pearson BTEC Level 2 Extended Certificate in Animal Care	500/8331/4
Pearson BTEC Level 2 Diploma in Animal Care	500/8365/X.

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 Firsts?

BTEC First qualifications are undertaken in further education and sixth-form colleges, schools and other training providers, and have been since they were introduced in 1983. Their purpose, approaches to teaching, learning and assessment are established and understood by teaching professionals, employers and learners alike.

The BTEC First qualifications within this specification have been revised to fit the new Qualifications and Credit Framework. As such, the revised titles are:

Pearson BTEC Level 2 Certificate in Animal Care

Pearson BTEC Level 2 Extended Certificate in Animal Care

Pearson BTEC Level 2 Diploma in Animal Care.

But for clarity and continuity they are referred to generically as BTEC First qualifications, where appropriate and maintain the same equivalences, benchmarks and other articulations (for example SCAAT points) as their predecessor qualifications. The following identifies the titling conventions and variations between the predecessor and new specifications.

Predecessor BTEC Firsts (accredited 2006)	BTEC Firsts (for delivery from September 2010)
Edexcel Level 2 BTEC First Diploma	Pearson BTEC Level 2 Diploma
Edexcel Level 2 BTEC First Certificate	Pearson BTEC Level 2 Extended Certificate
Not applicable	Pearson BTEC Level 2 Certificate

BTEC Firsts are designed to provide specialist work-related qualifications in a range of sectors. They give learners the knowledge, understanding and skills that they need to prepare for employment. The qualifications also provide career development opportunities for those already in work. Consequently they provide a course of study for full-time or part-time learners in schools, colleges and training centres.

BTEC Firsts provide much 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). A number of BTEC Firsts are recognised as Technical Certificates and form part of the Apprenticeship Framework. They attract achievement and attainment points that equate to similar-sized general qualifications.

On successful completion of a BTEC First qualification, learners can progress to or within employment and/or continue their study in the same, or related vocational area.

Total Qualification Time

For all regulated qualifications, Pearson specifies a total number of hours that it is expected the average learner will be required to undertake in order to complete and show achievement for the qualification: this is the Total Qualification Time (TQT).

Within this, Pearson will also identify the number of Guided Learning Hours (GLH) that we expect a centre delivering the qualification will need to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, such as lessons, tutorials, online instruction, supervised study giving feedback on performance.

In addition to guided learning, other required learning directed by tutors or assessors will include private study, preparation for assessment and undertaking assessment when not under supervision, such as preparatory reading, revision and independent research.

These qualifications also have a credit value, which is equal to one tenth of TQT. Pearson consults with users of these qualifications in assigning TQT and credit values.

This suite of BTEC Level 2 qualifications is available in the following sizes:

- Certificate – 150 TQT (15 credits, 90 GLH)
- Extended Certificate – 300 TQT (30 credits, 180 GLH)
- Diploma – 600 TQT (60 credits, 360 GLH)

Pearson BTEC Level 2 Certificate – 15 credits

The 15-credit BTEC Level 2 Certificate offers a specialist qualification that focuses on particular aspects of employment within the appropriate vocational sector. The BTEC Level 2 Certificate is a qualification which can extend a learner's programme of study and provide a vocational emphasis. The BTEC Level 2 Certificate is broadly equivalent to one GCSE.

The BTEC Level 2 Certificate is also suitable for more mature learners, who wish to follow a vocational programme of study as part of their continued professional development or who want to move to a different area of employment.

Pearson BTEC Level 2 Extended Certificate – 30 credits

The 30-credit BTEC Level 2 Extended Certificate extends the specialist work-related focus from the BTEC First Award and covers the key knowledge and practical skills required in the appropriate vocational sector. The BTEC Level 2 Extended Certificate offers flexibility and a choice of emphasis through the optional units. It is broadly equivalent to two GCSEs.

The BTEC Level 2 Extended Certificate offers an engaging programme for those who are clear about the area of employment that they wish to enter. These learners may wish to extend their programme through the study of a related GCSE, a complementary NVQ or another qualification. These learning programmes can be developed to allow learners to study complementary qualifications without duplication of content.

For adult learners the BTEC Level 2 Extended Certificate can extend their experience of work in a particular sector. It is a suitable qualification for those wishing to change career or move into a particular area of employment following a career break.

Pearson BTEC Level 2 Diploma – 60 credits

The 60-credit BTEC Level 2 Diploma extends the specialist work-related focus from the BTEC Level 2 Extended Certificate. There is potential for the qualification to prepare learners for employment in the appropriate vocational sector and it is suitable for those who have decided that they wish to enter a particular area of work. It is broadly equivalent to four GCSEs.

Some learners may wish to gain the qualification in order to enter a specialist area of employment or to progress to a Level 3 programme. Other learners may want to extend the specialism they studied on the BTEC Level 2 Certificate or the BTEC Level 2 Extended Certificate programme.

Key features of the BTEC Firsts in Animal Care

The BTEC Firsts in Animal Care have been developed in the environmental and land-based sector to:

- provide education and training for learners interested in employment and/or further education in the environmental and land-based and/or associated sectors
- give opportunities for employees who currently work in agricultural and land management industries to achieve a nationally recognised Level 2 vocationally specific qualification
- give full-time learners the opportunity to enter employment in the environmental and land-based sector or to progress to vocational qualifications such as the Pearson BTEC Level 3 Nationals in Animal Care
- give learners the opportunity to develop a range of skills and techniques, personal skills and attributes essential for successful performance in working life.

Rationale for the BTEC Firsts in Animal Care

These BTEC Firsts in Animal Care have been developed to provide entry and progression into and within animal care and husbandry industries that fall within the environmental and land-based sector. Lantra, the Sector Skills Council for the environmental and land-based industries, have identified knowledge, understanding and, technical skills that employers need from learners entering the sector in the coming years. Edexcel have included these in the development of units that make up these qualifications.

These qualifications are part of a wide suite of environmental and land-based qualifications offered by Edexcel and are designed primarily for 14-to 19-year-old learners who seek employment and/or further learning in the sector. They are also available to other learners who may already have experience within the sector but seek a nationally recognised qualification as part of their career. The qualifications are aimed at those interested in animal care and husbandry. The qualifications are made up from discrete 5 and 10 credit units of learning that give learners explicit recognition of their learning in education and work. BTEC First qualifications are free to be delivered and assessed in a range of traditional and contemporary models such as fulltime, part-time and e-learning; tutors are free to create innovative and creative assessments that fit local requirements while maintaining a national standard.

National Occupational Standards

BTEC Firsts are designed to provide much of the underpinning knowledge and understanding for the National Occupational Standards (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). BTEC Firsts 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 Pearson BTEC Level 2 Firsts in Animal Care relate to the following NOS.

- Level 2 Animal Care
- Level 2 Common Units.

Rules of combination for Pearson BTEC Level 2 First qualifications

The rules of combination specify the:

- total credit value of the qualification
- the minimum credit to be achieved at the level or above the level of the qualification
- the mandatory unit credit
- the optional unit credit
- the maximum credit that can come from other Level 3 BTEC units in this qualification suite.

When combining units for a BTEC First qualification, it is the centre's responsibility to ensure that the following rules of combination are adhered to.

Pearson BTEC Level 2 Certificate

- 1 Qualification credit value: a minimum of 15 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 8 credits.

Pearson BTEC Level 2 Extended Certificate

- 1 Qualification credit value: a minimum of 30 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 16 credits.

Pearson BTEC Level 2 Diploma

- 1 Qualification credit value: a minimum of 60 credits.
- 2 Minimum credit to be achieved at, or above, the level of the qualification: 31 credits.
- 3 Mandatory unit credit: 30 credits.
- 4 Optional unit credit: 30 credits.
- 5 A maximum of 10 optional credits can come from other Level 3 BTEC units to meet local needs.

Pearson BTEC Level 2 Certificate in Animal Care

The Pearson BTEC Level 2 Certificate in Animal Care is 15 credits and has 90 guided learning hour (GLH) qualification. It consists of optional units that provide for a combined total of 15 credits (where at least 8 credits must be at Level 2 or above).

Pearson BTEC Level 2 Certificate in Animal Care			
Unit	Optional units	Credit	Level
2	Maintain Animal Accommodation	5	2
3	Undertake Practical Animal Feeding	5	2
4	Maintain Animal Health and Welfare	10	2
6	Introduction to the Principles and Practices of Animal Behaviour and Handling	10	2
11	Introduction to Animal Breeds and Grooming	10	2
12	Understand the Principles and Practices of Animal Establishments	10	2

Pearson BTEC Level 2 Extended Certificate in Animal Care

The Pearson BTEC Level 2 Extended Certificate in Animal Care is 30 credits and has 180 guided learning hours qualification (GLH). It consists of optional units that provide for a combined total of 30 credits (where at least 16 credits must be at Level 2 or above).

Pearson BTEC Level 2 Extended Certificate in Animal Care			
Unit	Optional units	Credit	Level
2	Maintain Animal Accommodation	5	2
3	Undertake Practical Animal Feeding	5	2
4	Maintain Animal Health and Welfare	10	2
6	Introduction to the Principles and Practices of Animal Behaviour and Handling	10	2
7	Understand the Basic Principles of Animal Biology	10	2
11	Introduction to Animal Breeds and Grooming	10	2
12	Understand the Principles and Practices of Animal Establishments	10	2
13	Contribute to the Care of Exotic Animals	10	2
14	Contribute to the Nursing of Animals	10	2
15	Introduction to Caring for Ornamental Aquatics	10	2
16	Introduction to Caring for Horses	10	2

Pearson BTEC Level 2 Diploma in Animal Care

The Pearson BTEC Level 2 Diploma in Animal Care is 60 credits and has 360 guided learning hours (GLH) qualification. It consists of four mandatory units **plus** optional units that provide for a combined total of 60 credits (where at least 31 credits must be at Level 2 or above).

Pearson BTEC Level 2 Diploma in Animal Care			
Unit	Mandatory units	Credit	Level
1	Undertake Work Related Experience in the Land-based Industries	10	2
2	Maintain Animal Accommodation	5	2
3	Undertake Practical Animal Feeding	5	2
4	Maintain Animal Health and Welfare	10	2
Unit	Optional units		
5	Environmental and Land-based Business	10	2
6	Introduction to the Principles and Practices of Animal Behaviour and Handling	10	2
7	Understand the Basic Principles of Animal Biology	10	2
8	Participate in Providing Estate Maintenance	10	2
9	Conservation and Improvement of British Habitats	10	2
10	Presentation and Service for Retailing in the Land-based Sector	10	2
11	Introduction to Animal Breeds and Grooming	10	2
12	Understand the Principles and Practices of Animal Establishments	10	2
13	Contribute to the Care of Exotic Animals	10	2
14	Contribute to the Nursing of Animals	10	2
15	Introduction to Caring for Ornamental Aquatics	10	2
16	Introduction to Caring for Horses	10	2

Assessment and grading

In BTEC Firsts all units are internally assessed.

All assessment for BTEC First qualifications is criterion referenced, based on the achievement of all the specified learning outcomes.

Each unit within the qualification has specified assessment and grading criteria which are to be used for grading purposes. A summative unit grade can be awarded at pass, merit or distinction:

- to achieve a 'pass' a learner must have satisfied **all** the pass assessment criteria
- to achieve a 'merit' a learner must additionally have satisfied **all** the merit grading criteria
- to achieve a 'distinction' a learner must additionally have satisfied **all** the grading distinction criteria.

Grading domains

The assessment and grading criteria are developed in relation to grading domains which are exemplified by a number of indicative characteristics at the level of the qualification.

There are four BTEC First grading domains:

- application of knowledge and understanding
- development of practical and technical skills
- personal development for occupational roles
- application of generic skills.

Please refer to *Annexe B* which shows the merit and distinction indicative characteristics.

Guidance

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

- meet the assessment and grading criteria and
- achieve the learning outcomes within the units.

All the assignments created by centres should be reliable and fit for purpose, and should be built on the unit assessment and grading 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 written reports, graphs and posters, along with projects, performance observation and time-constrained assessments.

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

The assessment and grading criteria must be clearly indicated in the fit-for-purpose 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 and grading criteria.

When looking at the unit assessment and grading criteria grids and designing assignments, centres are encouraged to identify common topics and themes.

The units include guidance on appropriate assessment methodology. 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.

Calculation of the qualification grade

Pass qualification grade

Learners who achieve the minimum eligible credit value specified by the rule of combination will achieve the qualification at pass grade (see *Rules of combination for Pearson BTEC Level 2 First qualifications*).

Qualification grades above pass grade

Learners will be awarded a merit or distinction or distinction* qualification grade by the aggregation of points gained through the successful achievement of individual units. The number of points available is dependent on the unit level and grade achieved, and the credit size of the unit (as shown in the 'points available for credits achieved at different Levels and unit grades' below).

Points available for credits achieved at different levels and unit grades

The table below shows the **number of points scored per credit** at the unit level and grade.

Unit level	Points per credit		
	Pass	Merit	Distinction
Level 1	3	4	5
Level 2	5	6	7
Level 3	7	8	9

Learners who achieve the correct number of points within the ranges shown in the 'qualification grade' table will achieve the qualification merit or distinction or distinction* grade.

Qualification grade

Qualification	Points range above pass grade		
	Merit	Distinction	Distinction*
BTEC Level 2 Certificate	85-94	95-99	100 and above
BTEC Level 2 Extended Certificate	170-189	190-199	200 and above
BTEC Level 2 Diploma	340-379	380-399	400 and above

Please refer to *Annexe G* for examples of calculation of qualification grade above pass grade.

Quality assurance of centres

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 assessment 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.

The approach of quality assured assessment is made through a partnership between an approved centre and Edexcel. Edexcel is committed to ensuring that it follows best practice and employs appropriate technology to support quality assurance processes where practicable. Therefore, the specific arrangements for working with centres will vary. Edexcel seeks to ensure that the quality assurance processes that it uses do not place undue bureaucratic processes on centres and works to support centres in providing robust quality assurance processes.

Edexcel monitors and supports centres in the effective operation of assessment and quality assurance. The methods which it uses to do this for these BTEC First and National programmes include:

- ensuring that all centres have completed appropriate declarations at the time of approval, undertaking approval visits to centres where necessary
- requiring all centres to appoint a Lead Internal Verifier for designated groups of programmes and to ensure that this person is trained and supported in carrying out that role
- requiring that the Lead Internal Verifier completes compulsory online standardisation related to assessment and verification decisions for the designated programme
- assessment sampling and verification, through requested samples of assessments, completed assessed learner work and associated documentation
- overarching review and assessment of a centre's strategy for assessing and quality assuring its BTEC programmes.

Edexcel Quality Assurance Handbook

Centres should refer to the *Handbook for Quality Assurance for BTEC Qualifications*, issued annually, for detailed guidance.

An approved centre must make certification claims only when authorised by Edexcel and strictly in accordance with requirements for reporting.

Centres that do not fully address and maintain rigorous approaches to quality assurance will be prevented from seeking certification for individual programmes or for all BTEC First and National programmes. Centres that do not comply with remedial action plans may have their approval to deliver qualifications removed.

Programme design and delivery

BTEC First qualifications consist of mandatory units and optional units. Optional units are designed to provide a focus to the qualification and give more specialist opportunities in the sector.

In BTEC Firsts each unit has a number of *guided learning hours* and centres are advised to take this into account when planning the programme of study associated with this specification.

Mode of delivery

Edexcel does not define the mode of study for BTEC Firsts. 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 learners' 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

BTEC Firsts are designed to prepare learners for employment in specific occupational sectors. Physical resources need to support the delivery of the programme and the proper 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 specialist vocational nature of BTEC First 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.

An outline learning plan is included in every unit as guidance which demonstrates one way in planning the delivery and assessment of the unit. The outline learning plan can be used in conjunction with the programme of suggested assignments.

Where the qualification has been designated and approved as a Technical Certificate and forms part of an Apprenticeship scheme, particular care needs to be taken to build strong links between the learning and assessment for the BTEC First qualification and the related NVQs and Functional Skills that also contribute to the scheme.

Meeting local needs

Centres should note that the qualifications set out in this specification have been developed in consultation with centres and employers and the Sector Skills Councils or the Standards Setting Bodies for the relevant sector. Centres should make maximum use of the choice available to them within the optional units to meet the needs of their learners, and local skills and training needs.

In certain circumstances, units in this specification might not allow centres to meet a local need. In this situation, Edexcel will ensure that the rule of combination allows centres to make use of units from other BTEC specifications in this suite. Centres are required to ensure that the coherence and purpose of the qualification is retained and to ensure that the vocational focus is not diluted.

Limitations on variations from standard specifications

The flexibility to import standard units from other BTEC Firsts is limited to a total of 25 per cent of the qualification credit value (see *Rules of combination for Pearson BTEC Level 2 First qualifications*).

These units cannot be used at the expense of the mandatory units in any qualification.

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. 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

BTEC Firsts give learners opportunities to develop and apply Functional Skills.

Functional Skills are offered as stand-alone qualifications at Level 2. See individual units for opportunities to cover ICT, Mathematics and English Functional Skills.

Personal, learning and thinking skills

Opportunities are available to develop personal, learning and thinking skills (PLTS) within a sector-related context. PLTS are identified in brackets after the unit pass criteria to which they are associated and they are also mapped in *Annexe C*. Further opportunities for learners to demonstrate these skills may also be apparent as learners progress throughout their learning.

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 Level 2 qualification. For learners who have recently been in education, the profile is likely to include one of the following:

- a BTEC Level 1 qualification in an environmental and land-based subject or a related vocational area
- a standard of literacy and numeracy supported by a general education equivalent to four GCSEs at grade D-G
- other related Level 1 qualifications
- related work experience.

More mature learners may present a more varied profile of achievement that is likely to include experience of paid and/or unpaid employment.

Restrictions on learner entry

Most BTEC First qualifications are for learners aged 14 years and over.

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.

Pearson BTEC Level 2 Firsts are listed on the DfE funding lists Section 96 and Section 97.

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 Pearson BTEC Level 2 First 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 will appear on the learner's Notification of Performance (NOP).

● Level

All units and qualifications 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 level descriptors and, where appropriate, the National Occupational Standards (NOS) and/or other sector/professional benchmarks.

● Credit value

In BTEC First qualifications each unit consists of a credit value; learners will be awarded credits for the successful completion of whole units.

A credit value specifies the number of credits that will be awarded to a learner who has achieved all the learning outcomes of the unit.

Guided learning hours

Guided learning hours for the unit as defined in page 3.

Aim and purpose

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

Learning outcomes state exactly what a learner should 'know, understand or be able to do' as a result of completing 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 NOS. 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 pass, merit and distinction grading criteria.

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 must have the opportunity within the delivery of the unit 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 and grading criteria. The merit and distinction grading criteria enable the learner to achieve higher levels of performance in their acquisition of knowledge, understanding and skills.

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 elements 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).

Assessment and grading grid

Each grading grid gives the assessment and grading criteria used to determine the evidence that each learner must produce in order to receive a pass, merit or distinction grade. It is important to note that the merit and distinction grading criteria require a qualitative improvement in a learner's evidence and not simply the production of more evidence at the same level.

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* – the outline learning plan has been included in every unit as guidance and demonstrates one way in planning the delivery and assessment of a unit. The outline learning plan can be used in conjunction with the programme of suggested assignments.
- *Assessment* – gives amplification about the nature and type of evidence that learners need to produce in order to pass the unit or achieve the higher grades. This section should be read in conjunction with the grading criteria.
- *Suggested programme of assignments* – the table shows how the suggested assignments match and cover the assessment grading criteria.
- *Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications* – sets out links with other units within the qualification. These links can be used to ensure that learners make connections between units, resulting in a coherent programme of learning. The links show opportunities for integration of learning, delivery and assessment.
- *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.
- *Employer engagement and vocational contexts* – gives a short list of agencies, networks and other useful contacts for employer engagement and for sources of vocational contexts.
- *Indicative reading for learners* – gives a list of learner resource material that benchmarks the level of study.

Units

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Unit 1: Undertake Work Related Experience in the Land-based Industries

Unit code: H/600/9335

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of work related experience and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Work experience is an important part of any vocational course.

Learners on vocational courses should have experience of the type of work that they hope to do and an idea of the expectations of those who may employ them. Actual work experience may be gained by a number of routes, eg as part of an industrial placement while at college; while working on a planned daily or weekly basis on the college's commercial and/or educational facilities; while undertaking voluntary work within the industry; in the form of previous relevant and current work experience in the industry; or as a member of a group of learners invited to carry out practical work in, for example, a country park, farm or animal care centre. All of the above may be useful in gathering evidence against the grading criteria for this unit.

Work related experience should not just involve actually undertaking activities in a work environment. Talking to, listening to and watching those with experience of particular industries and/or situations is a very valid way of beginning to understand the work involved and what is required of the employee.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the range and scope of job roles within an environmental and land-based industry
- 2 Be able to use relevant documents and skills relating to work experience
- 3 Be able to plan and review self-development during work experience
- 4 Be able to report on the work experience.

Unit content

1 Know the range and scope of job roles within an environmental and land-based industry

Environmental and land based industry: range of sectors represented eg production (livestock, crops), leisure/tourism, equestrian, forestry/arboriculture, fishery management, aquaculture, farriery, floristry, fencing, gamekeeping, animal care/welfare, conservation, countryside management, land-based engineering, landscaping and horticulture

Job roles: the range of roles available within the chosen sector

2 Be able to use relevant documents and skills relating to work experience

Documents: job advertisement; CV; covering letter; application form; job/role description; essential and desirable personal requirements; using these documents in an appropriate way

Skills: identification of skills required to work in the sector eg interpersonal skills, communication, technical knowledge, practical skills; use of skills

3 Be able to plan and review self-development during work experience

Personal skills: identify own skills

Planning self-development: methods of reviewing own development needs eg skills audit

Self-development: methods of reviewing self-development eg meeting/discussion with supervisor; self review

4 Be able to report on the work experience

Evidence required: description of employer's business; description of employees' roles; pictorial evidence about the employer/site eg maps, plans, photos, leaflets; description of how the business makes income; your own role within the organisation and tasks you carried out.

Methods of presentation: verbal, written, visual

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe different types of jobs within an environmental and land-based industry [IE]	M1 prepare a person specification for a job in the chosen sector	D1 review a job application against a given person specification
P2 describe the skills and qualifications required for different types of jobs within an environmental and land-based industry [CT]		
P3 locate three advertisements for jobs from different sources available within the environmental and land-based industry [IE]	M2 identify common themes from three job advertisements	D2 prepare a job advertisement.
P4 produce an application for work experience in the environmental and land-based sector [IE, SM]		
P5 prepare for an interview for work experience [IE, SM]	M3 prepare questions to be used in a job interview.	
P6 undertake an interview for work experience [IE, SM]		
P7 review own skills and experience against the requirements for a specific industry [RL]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P8 prepare a self-development plan for work experience [RL]		
P9 review a self-development plan during and after work experience [RL]		
P10 gather and prepare evidence during the work experience [IE]		
P11 present information to others on work experience. [RL]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Delivery of this unit will involve both practical and written assessment and, most importantly, will have links to industrial experience placements.

Tutors could use a wide range of techniques including lectures, discussions, seminar presentations, visiting speakers, site visits and practicals, research using the internet and/or library resources and the use of personal and/or industrial experience. Delivery should stimulate, motivate, educate and enthuse the learner.

Work placements should be monitored regularly to ensure the quality of the learning experience. Learners and supervisors should be aware of the requirements of this unit prior to any work related activities, so that naturally occurring evidence might be collected at the time. Learners should be encouraged to ask for observation records and/or witness statements to be provided as evidence. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Learners would benefit from work experience. This could be as part of an industrial placement while at college; daily or weekly work at the college's commercial and/or educational facilities; voluntary work within the sector, eg in an animal care centre, country park, farm, estate, garden centre etc.

Tutors could integrate the delivery, private study and assessment relating to this unit with any other relevant units and assessment instruments used in the learner's programme of study. Learners must be given supported time to plan and review their own development. They should do a minimum of 150 hours or related study/work to complete this unit successfully. Learners could keep a diary/log to show that they have achieved the requirement of completing their work experience. Tutors should encourage as wide a range of experience as possible so that learners develop relevant knowledge and skills.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Assignment 1: Advertising a Job in the Land-based Sector (P1, P2, P3, M1, M2, M3, D1, D2)
Introduction of brief.
Theory session.
Research the industry and roles, research advertisements, write person specification, prepare questions, review job application, prepare job advert.
Assignment 2: Getting a Job in the Land-based Sector (P4, P5, P6)
Introduction of brief.
Theory session.

Topic and suggested assignments/activities and/assessment

Compete job application, prepare answers to likely questions, undertake interview.

Assignment 3: Workplace Self-development (P7, P8, P9)

Introduction of brief.

Theory session.

Review own skills, prepare self development plan, review self development plan.

Assignment 4: My Work Experience Placement (P10, P11)

Introduction of brief.

Theory session.

Gather information, prepare and present information.

Work experience.

Assessment

For P1, learners must describe different types of jobs within an environmental and land-based industry. This should be a sector of the industry in which learners have an interest or which relates to their vocational or chosen course of study or intended future career.

P2 requires learners to describe the skills and qualifications required for different types of jobs within an environmental and land-based industry. The evidence could focus on two or three different jobs from within the same sector and describe both the common skills and qualifications as well as the areas where the requirements differ.

For P3, learners must locate three advertisements for jobs from different sources available within the environmental and land-based industry. They must provide evidence that they have looked at three different sources for these advertisements.

P4 must include evidence that the learner can produce an application for work experience in the environmental and land-based sector. This could be done on a pro forma application designed by the learners themselves or one provided by the tutor.

For P5, learners must prepare for an interview for work experience. They will evidence this by providing a list of answers to questions which it is considered are likely to be asked by an interviewer. These questions may be provided/suggested by the tutor or could be drawn up by the learner. The evidence could be presented in the form of an interview (see P6) or could be presented as written answers or an audio recording of them practising the answers.

To meet P6, learners will undertake an interview for work experience, where they will have the opportunity to present their answers to the questions they prepared for P5, and to show other aspects of preparation such as appropriate personal presentation, and asking appropriate questions. This could either be evidenced via mock interviews with other learners acting as the interview panel and using the evidence they have prepared for M1 and M3, or it could be evidenced by a real interview for a work experience placement, supported by a witness statement from the interviewer.

For P7, learners will provide evidence that they can review their own skills and experience against the requirements for a specific industry. This can be linked closely with the evidence presented for P2, with learners identifying their 'skills gap' either through a skills audit or similar.

To evidence P8, learners will need to prepare a self-development plan for their work experience placement. This could be done on a pro forma provided by, or in a format suggested by the tutor. The plan will identify areas of improvement that the learners need to develop during their work experience, and show how the learners are going to do this.

For P9, learners need to review the self-development plan during and after work experience. Evidence could be in the form of witness statements or tutor observations to show that the plan had been discussed and reviewed, that progress to date had been discussed and how future progress may occur.

To meet P10, learners must gather and prepare evidence during the work experience. This evidence will cover the content.

For P11, learners must present information to others on work experience. This can be done in any suitable format – it may be a poster with photos, leaflets and learner-prepared text about the employer; it could be a verbal presentation with accompanying slides/pictorial evidence; or it could be an audio-visual presentation made at the placement.

For M1, learners need to prepare a person specification for a job in the chosen sector. The specification could be based on one of the advertisements researched in P3, and should show the major skills, qualities and qualifications required for that role, and an indication of whether these are essential or desirable.

To evidence M2, learners are required to identify common themes from three job advertisements – what are the main areas of commonality, are there things that all three have? It may also be that learners consider what differences there are between the advertisements. This could be presented in a poster format with annotations to show areas of difference/similarity.

For M3, learners need to prepare questions to be used in a job interview. This can be the same job for which the person specification has been produced. It is expected that a list of at least 10 questions is prepared.

For D1, learners must review a job application against a given person specification. This could be an application which has been produced by other learners for the purpose of meeting criterion P4, or it could be an example application form provided by the tutor.

To meet D2, learners will prepare a job advertisement. This will link in with the evidence required for P3 and M2 and could advertise the role for which the person is being sought in M1.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, P3, M1, M2, M3, D1, D2	Advertising a Job in the Land-based Sector	You work for an employer in the land-based sector and are in the position of taking on a new staff member. Your manager has asked you to see what other roles exist with other similar employing organisations and what sort of skills and qualifications they are looking for, by sourcing different advertisements and identifying common themes in them. Once you have found that out, it is then your responsibility to write a person specification for the role you will advertise, prepare an advertisement to attract applicants, review an application against your criteria, and plan the questions you would ask in an interview.	Verbal or written report.
P4, P5, P6	Getting a Job in the Land-based Sector	You are looking for your first job in the land-based sector. You need to complete an application form for a job you would like to do, prepare for an interview by coming up with a list of questions you would want answered and having a job interview.	Application form. List of questions. Interview.
P7, P8, P9	Workplace Self-development	To progress within any employment, self-development is an essential feature. This requires you to have a clear idea about what employers need from their employees and the skills and experience you have already got and those you need to build. You then need to prepare a plan to show how you might build the required skills and experience and to review this plan during and after work experience.	Report on what employers require of employees in the chosen sector. Self-development plan. Evidence of review of the plan during and after work experience.
P10, P11,	My Work Experience Placement	In order to inform other learners about your work experience placement, you need to provide them with information about it such as a description of the employer's business, a description of the other employees' roles, pictures of the organisation or site, a description of how the business makes income and a description of what you did while you were there.	Report on work experience placement.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
Undertake Work Experience in the Land-based Industries	Undertake and Review Work Related Experience in the Land-based Industries
Maintain Animal Accommodation	Manage Animal Accommodation
Conservation and Improvement of British Habitats	Plan and Monitor Animal Feeding
Understand the Principles and Practices of Animal Establishments	

Essential resources

Learners require supervised access to suitable sites for work experience. Centres may need to provide transport to suitable sites. First aid facilities and appropriately trained staff are essential where practical activities are undertaken. For work placements away from the college, staff time must be made available as per individual college policies relating to work placements.

Employer engagement and vocational contexts

This unit focuses on skills and experience to be developed through preparing for, and undertaking, work experience. Centres are encouraged to create and develop links with local employers who can provide appropriate work experience.

Indicative reading for learners

Textbooks

James J – *You're Hired! Interview: Tips and Techniques for a Brilliant Interview* (Trotman, 2009) ISBN 9781844551781

Mills C – *You're Hired! CV: How to Write a Brilliant CV* (Trotman, 2009) ISBN 9781844551774

Websites

Countryside Jobs Service	www.countryside-jobs.com
Farmers Weekly	www.fwi.com
Horticultural Careers	www.growcareers.info
Land-based Jobs online	www.land-force.org.uk/index.aspx
Lantra	www.lantra.org.uk
Lantra online Competency Framework	www.ruralslp.co.uk/index.aspx
UK Countryside and Nature Conservation	www.naturenet.net

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	researching jobs within the sector researching job advertisements and evaluating their relevance completing a job application preparing for, and participating in, a job interview gathering and preparing evidence during work experience
Creative thinkers	describing the skills and qualifications required for a job in the land-based sector
Reflective learners	preparing and reviewing a self-development plan presenting information to others on their work experience reviewing their own skills and experience
Self-managers	carrying out research.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Team workers	working with others to carry out interviews.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching roles within the sector researching job advertisements
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	researching roles within the sector researching job advertisements
ICT – Develop, present and communicate information	
Bring together information to suit content and purpose	developing a presentation about work experience
Present information in ways that are fit for purpose and audience	making the presentation about work experience
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	taking part in work experience making presentation about work experience
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing person specifications for job.

Unit 2: Maintain Animal Accommodation

Unit code: Y/600/9333

Level 2: BTEC First

Credit value: 5

Guided learning hours: 30

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of animal accommodation and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

The welfare of animals is of high importance in today's world and is the responsibility of all those connected with animals in any way. The Five Needs Model promoted by the RSPCA with reference to the Animal Welfare Act 2006 is a good starting point. Having an awareness of an animal's natural habitat will help in ensuring its welfare is maintained.

This is a practical unit which develops learners' ability to select the appropriate housing, taking into account the need for sufficient space and shelter; bedding for comfort and hygiene, furnishings for feeding, watering and enrichment. This unit will help to prepare learners for the workplace as they will clean and care for the animals and maintain the housing on a regular basis.

Health and safety is also important in today's world. Through following this unit learners will learn how to work safely while cleaning and caring for animals in order to protect themselves, the animals and others around them.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know how to prepare and maintain animal housing
- 2 Be able to clean and prepare housing and bedding for animals
- 3 Be able to maintain animal housing.

Unit content

1 Know how to prepare and maintain animal housing

Construction and design of different types of animal housing: in terms of materials (eg wood, woodchip, metal, plastic, glass, roof felt, animal friendly paints and varnishes, other); structure and design (indoor and outdoor housing, size in accordance with natural habitats eg does the animal like space or confined areas, latest welfare legislation, and the latest designs on the market); range of costs, security eg electrical fittings such as heat mats, bulbs, wires; escape possibilities; access; shelter and light; feeding and watering equipment; additional items eg rabbit runs

Environment and welfare factors: location inside and outside buildings eg away from draughts and direct sunlight, away from electrical wires and other equipment. Position with relation to other animals and children; animals needs with relation to its natural environment and the Five Needs

Fixtures and fittings: food and water providers eg heavy ceramic food bowls and gravity fed water bottles, with a reason for choice; enrichment materials bought or home made eg gnawing blocks, tree branches, hamster tubes, reptile caves; other fixtures and fittings as necessary eg heat mats, different types of basking lights, UV lights

Types, properties and uses of bedding used for animals: range of different types of bedding eg shavings, sawdust, straw, gravel, sand, clay, paper, cat litter, bean bags, other; what makes a chosen bedding suitable for an animal; reasons for unsuitable bedding for different animals eg rats on shavings may have respiratory problems and cat litter may be a better alternative

2 Be able to clean and prepare housing and bedding for animals

Suitable animal housing and bedding: suitable animal houses for a range of animals and appropriate bedding for the animal; preparation of animal housing for a range of animals including bedding, and offering an alternative, feeding and watering equipment, and enrichment

Animal housing cleanliness and disposal of waste in line with good environmental practice: cleaning of a range of animal houses using appropriate equipment; good housekeeping eg scrubbing food and water bottles to ensure no algae is visible; removal of faeces; when to spot clean and do a full cleanout; use of safe cleaning products; which products are animal safe and those which are not; safe use of PPE eg gloves, masks, overalls, footwear; safe working practice eg lifting, body positioning when cleaning eg bending, kneeling; awareness of safe positioning of equipment such as buckets, brushes, cloths and having good personal hygiene; consequence of dirt and germs eg flystrike, for humans and animals; zoonoses and the need for personal hygiene; correct disposal of wastes eg cat litter trays

3 Be able to maintain animal housing

Suitable animal housing and bedding: selection of relevant animal housing for a range of animals and appropriate bedding for the animal; preparation of animal housing for a range of animals including bedding, and offering an alternative, feeding and watering equipment, and enrichment; cleaning of a range of animal houses using appropriate equipment

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the construction and design of different types of animal housing in terms of: <ul style="list-style-type: none">• materials• structure and design• environment and welfare factors [IE, CT, SM]	M1 select alternative housing for a range of animals, with reasons, including different structures and designs	D1 explain for a given animal how housing, bedding and enrichment relate to its welfare and its natural habitat
P2 identify different types of fixtures and fittings	M2 select alternative bedding for a range of animals with reasons	
P3 describe the types, properties and uses of bedding used for animals		
P4 select suitable animal housing and bedding [SM, TW, CT, EP]	M3 confidently clean and maintain a range of animal housing on a regular basis, with limited supervision and safely demonstrating appropriate use of PPE, hygiene and waste disposal.	D2 explain, for given animals, what can go wrong if they are not cleaned out regularly and properly and the health risks to humans from animal waste
P5 prepare animal housing and bedding [IE, RL]		
P6 clean animal housing and dispose of waste safely in line with good environmental practice and legislation		
P7 describe the importance of safety and security checks on animal housing [SM, IE, CT]		D3 produce detailed health and safety and maintenance checks for a range of animal housing.
P8 carry out activities to maintain animal housing.		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

This unit should be delivered mainly in a supervised practical environment. Visits to pet shops to view a variety of animal housing could be undertaken as well as visits to welfare organisations and local parks which keep small animals.

Work placements should be monitored and witness statements provided on how learners have cared for and maintained animal housing. The tutor should keep observation records. An animal care log could be produced daily for each animal which learners could sign.

Guidance on the use of observation records and witness statements is provided on the Edexcel website.

The tutor must stress the importance of animal welfare, which should not be compromised by teaching or assessment, and the need to observe health and safety rules and regulations. The tutor must carry out risk assessments before learners carry out any practical activities and demonstrate safety procedures.

Private study could involve learners researching, via books or the internet, different aspects of animal housing and bedding which could then be integrated into classroom activities.

Learning outcome 1 is likely to be delivered through formal lessons, observations, demonstrations and visits.

Learning outcome 2 requires learners to carry out supervised practical work, cleaning and preparing animal housing. This should be carried out in house firstly by tutor demonstration and followed by practical sessions. Work placements can also be used here.

Learning outcome 3 could be integrated into the above through formal delivery in class and demonstrations of routine maintenance. Learners should be encouraged to log this in work placement diaries.

Learners should be encouraged to consider animal welfare and health and safety at all times.

Wherever a range of animals is stated this range should include a mammal, a bird and at least one other from insect, amphibian, reptile, arachnid, fish, mollusc or other suitable animal, providing details.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment

Introduction of unit and five freedoms. In classroom have a selection of housing and ask learners, in teams, to write on large sheets of paper how each house relates to the five freedoms then use this as a starting point for discussion or debate.

Assign each learner a different animal. Using the library or the internet, they should research where in the world it originates from, its habitat, food, natural bedding, behaviour, temperature, and any other information they think is useful. They could put this information on a world map on the wall with string attaching it to the country the animal comes from. This could include private study time.

Topic and suggested assignments/activities and/assessment

In the animal house go over health and safety, rules and regulations. Learners to produce a generic health and safety poster which tutor types up or laminates to pin up on wall.

Tutor-led demonstration and discussion of different animal housing and provisions for food, water, enrichment, ensuring they cover a wide range of animals. Cross- reference with learner research relating to natural habitats. Discuss alternatives, both good and bad. Learners can carry this out and present to each other or as group posters.

Investigate a range of bedding. This could be a laboratory practical activity to see which produces the most dust, which is softest, which is the most absorbent etc so that learners gain an awareness of bedding types and their uses.

Assignment 1: Competition (P1, P2, P3, M1, M2, D1)

Selection and description of different animal accommodation including bedding and identification of appropriate fixtures fittings. Explanation of housing, bedding and enrichment for a given animal and how this relates to its welfare and natural environment.

Demonstrate cleaning, preparing, routine maintenance, repair, logbooks, waste disposal, daily routines.

Learners spend time on the practical work of cleaning, maintaining etc.

Assignment 2: World of Work! (P4, P5, P6, P8, M3, D2)

Selection and preparation of housing and bedding for two different animals, cleaning and maintenance of this on a regular basis.

Assignment 3: Safety and Security (P7, D3)

Discussion of importance of safety and security and health and safety and maintenance checklist.

Assessment

To achieve a pass, all pass grade criteria must be complete. For P1, P2 and P3 learners must describe the construction and design of animal housing and appropriate materials for the structure and design, identify different fixtures and fittings and take into consideration the environmental conditions and welfare issues. They must describe the different types of suitable bedding and cover a minimum of one mammal, one bird and one other reptile, insect or amphibian. For P4, P5 and P6 learners must demonstrate selection and maintenance of animal housing and bedding for a minimum of two different animals. Evidence could be in the form of witness statements or observation records of practical activities carried out. For P7, learners must describe the importance of safety and security and be able to maintain animal housing.

M1 is achieved when learners describe the reasons for alternative housing. This may be provided by a workplace environment if they work in a pet shop for example and advise customers on a variety of animal housing available to perhaps suit a customer's budget. For M2 they need to be able to advise on alternative beddings to cope with situations of owners or pets such as allergies, budget or amount of mess a bedding makes. M3 should be awarded if the tutor and/or work placement assess the learner as safely able to carry out cleaning and care of animals confidently and working safely. They should demonstrate a knowledge of safe waste disposal. Evidence could be through a learner presentation or poster.

D1 expects learners to be fully aware of animals in their natural habitats and how housing, bedding and enrichment encourage natural behaviour and good welfare.

D2 is achieved when learners demonstrate regular animal housing maintenance with confidence, safety and minimal assistance. For D3 learners must produce detailed checks for use with a minimum of two animal accommodation scenarios. Evidence could be in a completed checklist.

Practical assessments can be evidenced through witness statements, or observation records. Guidance can be found on the Edexcel website.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P1, P2, P3, M1, M2, D1	Competition	You are entering a competition to win a holiday to study wild animals. You have to provide posters or models of animal houses to enter.	Posters or models should contain information relating to criteria.
P4, P5, P6, P8, M3, D2	World of Work!	You are working in a pet shop/other and are cleaning and looking after animals on a regular basis.	Task based, using witness statements, observation records or logbooks.
P7, D3	Safety and Security	Health and safety managers from the local council are coming in to check your security levels. You can either provide an explanation verbally or in writing with examples of what can go wrong and how you are making sure that it doesn't happen here. A checklist can also be provided to show that you regularly check and maintain the animal houses you are responsible for.	Verbal or written communication.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite.

Level 2	Level 3
CU 37.1 Select and prepare accommodation for animals	Manage Animal Accommodation
CU 37.2 Maintain animal accommodation	
Undertake Work Related Experience in the Land-based Industries	
Maintain Animal Health and Welfare	
Introduction to Animal Breeds and Grooming	
Contribute to the Care of Exotic Animals	
I 4 Contribute to the Nursing of Animals	

Essential resources

Learners will need access to an on-site animal house with a range of animals. There should be a suitable number of animals for the number of learners to avoid stress and welfare issues arising.

Learners will also need access to computers, library facilities or suitable books for research and assignment work.

Classrooms and suitable materials for posters, models, and written work should also be available.

Employer engagement and vocational contexts

This unit focuses on the practical aspect of working in a work placement in a confident and independent manner. It encourages communication through discussion. By developing their knowledge, learners may become confident in and enthusiastic about working in a workplace environment and giving advice and helping customers with pet knowledge. Good work placements help with this unit but they are not essential as for Unit 1. Visits to organisations, enabling learners to observe good working practices, would also be an advantage.

Indicative reading for learners

Textbooks

Alderton D – *You and Your Pet Bird* (Dorling Kindersley, 1995) ISBN 9780751301571

Brown M and Richardson V – *Rabbitlopaedia* (Ringpress Books Ltd, 2005) ISBN 9781860541827

Evans J and White K – *Catlopaedia* (Ringpress Books Ltd, 2004) ISBN 9781860540189

Evans J and White K – *Doglopaedia* (Ringpress Books Ltd, 2005) ISBN 9781860540745

Harper Don – *Caring for your pet Hamsters and Gerbils* (Interpet Ltd, 1996) ISBN 9781902389813

Journals

Animal Action – RSPCA

Websites

Blue Cross www.bluecross.org.uk

Pet Care www.petcare.org.uk

RSPCA www.rspca.org.uk

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	producing information about animals in their natural habitats researching diseases that can occur due to lack of cleaning
Creative thinkers	producing posters or models for assignments
Reflective learners	reviewing their own health and safety, and cleaning routines of animals
Team workers	participating in debates and discussions about the five freedoms in relation to animal housing working together and sharing equipment in practical work
Self-managers	taking responsibility for their work with animals, and when they are producing assignment work
Effective participators	working together to practically assess the qualities of bedding in a laboratory environment, and also when in the work environment.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	researching animal environments and diseases or what can go wrong scenarios for assignments
Creative thinkers	in the animal house solving problems such as alternative types of bedding, suitable cleaning materials, security of the housing
Reflective learners	reviewing own working practices and health and safety assessing results of laboratory work
Team workers	participating in debates and discussions working together in practical situations
Self-managers	managing own work for assignments and observations
Effective participators	participating in discussions and debates.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using ICT for research producing a leaflet on health and disease for their assignment
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	creating folders to store class and assignment work
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	using recommended websites for research
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing leaflets or posters
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, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	analysing the costs to customers in pet shops of a selection of appropriate housing and bedding
Identify the situation or problem and the mathematical methods needed to tackle it	analysing the costs to customers in pet shops of a selection of appropriate housing and bedding
Select and apply a range of skills to find solutions	checking size and measurements of animal housing for suitability
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	sizing animal housing
Draw conclusions and provide mathematical justifications	sizing housing where more than one animal needs to be accommodated
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	participating in discussions and debates
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	carrying out library research
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	producing leaflets and written information for assignment work.

Unit 3: Undertake Practical Animal Feeding

Unit code: T/600/9324

Level 2: BTEC First

Credit value: 5

Guided learning hours: 30

● Aim and purpose

This unit aims to provide learners with the skills required to undertake practical animal feeding. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or to further education and training.

● Unit introduction

General animal care skills are vital for anyone wishing to work within the animal care sector. Feeding animals does not just cover providing animals with food, but also the necessary equipment, how to provide and present food to the animal, feeding at different life stages, and the recording of food and water intake to monitor the general health of the animal.

There are many different paths within the animal care sector, but feeding and husbandry are required at every level.

The unit will prepare learners for feeding a variety of species, and can be linked to healthcare and enrichment of animals by learning about different ways of presenting food to animals to mentally stimulate them.

The unit has three learning outcomes which cover selection and preparation of feed and water for animals, providing food and water to animals, and monitoring and recording feeding and watering habits.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to select and prepare equipment and food to feed and water animals
- 2 Be able to provide feed and water to animals
- 3 Be able to monitor animals' feeding and watering and maintain appropriate records.

Unit content

1 Be able to select and prepare equipment and food to feed and water animals

Feeding equipment: utensils eg knives, chopping boards, graters, tweezers; buckets; bowls; tin openers; troughs; automatic feeders

Hygiene and health and safety: use of PPE eg gloves, apron, protective footwear; safe use of equipment; use of disinfectants and cleaning agents; prevention of cross contamination

Watering equipment: buckets; bowls; bottles; drippers; water drinkers; water in accommodation eg waterfalls, misters; automatic filling troughs

Preparation techniques by species: feed ratios; correct feeding equipment, methods, presentation of food (appropriate use, reasons for); appropriate feeding times and intervals

2 Be able to provide feed and water to animals

Planning diets and providing food to animals: selection, preparation and presentation of food eg size considerations, enrichment opportunities eg hiding food; providing live food eg crickets; supplementation; time of day to feed; amount of food to feed per animal; types of food – fresh, frozen, tinned, dried; differences between feeding individuals and groups of animals

Life stages: young; old; working; pregnant; lactating; ill; breeding and the effects on feeding and nutrition

Legislation: current relevant legislation eg Animal Welfare Act

3 Be able to monitor animals' feeding and watering and maintain appropriate records

Records: date; time; amount fed; amount eaten; variations in life stage affecting feeding; growth of animals related to feeding; how to report a problem with feeding; monitoring feeding of live food to animals; appropriate frequency of monitoring

Problems: obesity; malnutrition; fur loss; breeding problems; illness

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 select the appropriate feeding and watering equipment for specified animals [CT, EP, SM, TW]	M1 compare the selection, preparation and amounts of food given to animals at different life stages	D1 justify the most appropriate food and water presentation for a given species at varying life stages
P2 prepare feeding and watering equipment for selected animals to comply with current UK legislation [TW, CT, EP, SM]		
P3 select and prepare suitable types and amounts of food according to animals' needs, including: <ul style="list-style-type: none"> • fresh • dried • tinned • frozen [CT, SM, RL, EP, IE]		
P4 plan diets for selected animals according to their life stage and specific nutritional needs [CT, RL, EP, SM, TW, IE]		
P5 provide feed and water for animals [TW, IE, SM]		
P6 follow instructions for the disposal of different types of animal feed and feed waste products [EP, RL, CT]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P7 carry out monitoring and recording of selected animals' food and water intake [IE, TW, SM, EP, RL]	M2 evaluate alternative ways of monitoring and reporting animals' food and water intake.	D2 suggest potential reasons for changes in a specified animal's food and water intake.
P8 report any problems likely to occur if animals have an inadequate or inappropriate diet. [EP, IE, CT, SM]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Learners should have opportunities to practise feeding a variety of animal species from the following categories: exotic, small mammal, large mammal, rodent and bird. Emphasis should be on practical delivery and assessment where possible, with adequate time for learners to prepare for these assessments.

All learners should have access to animals with the emphasis being on health and safety and animal welfare at all times. This will involve careful planning to ensure that animals are not stressed or overused.

Learners should be encouraged to carry out independent research, to allow for guided development of research and independent thinking skills.

Tutors should also be encouraged to formulate links with external animal care organisations to provide a 'real' view of animal feeding and how it relates to the overall health and welfare of animals. This could be via both visits to animal collections at feeding time, and visits from guest lecturers who are animal care professionals. Some of the research for this may be carried out during off site visits to animal collections, or via research material such as books, journals or the internet.

Emphasis should be on the practical elements of the unit, as feeding is best delivered through practical demonstrations and hands-on experience rather than classroom-based activities.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to the unit and the animal care facilities of the centre.
Assignment 1: Preparing and Providing Food and Water to Animals (P1, P2, P3, P4, P5, P6, M1, D1)
Tutor to introduce assignment brief.
Practical activity: preparing food and water for animals – equipment used, food for different species, ways of presenting food to animals, disposing of waste.
Theory: animal nutrition, content of feed, selection of appropriate diets for various species, disposal of waste, weighing and measuring foods, food identification.
Assignment 2: Monitoring and Recording Feeding and Watering (P7, P8, M2, D2) and Research into Life Stages
Tutor to introduce assignment brief.
Theory: planning feeding and watering for different life stages, problems likely to occur with incorrect feeding.
Practical/simulated activity: monitoring and reporting on feeding and likely problems.

Assessment

Most of the assessment for this unit should be based around practical sessions due to the nature of the content. Learners must have experience of feeding animals in real life situations rather than simulations.

For P1, P2 and P3, learners need to select appropriate food and equipment to feed and water specified animals (P1). Tutors could use a check sheet at the beginning of a feeding session, ensuring that learners have all the correct and necessary food and equipment. Learners are then required to prepare the equipment, which again could be included in the check sheet (P2). In doing this learners need to ensure that they comply with current UK legislation. Learners must select and prepare amounts and types of foods correctly according to animal needs (P3), which should include at least one type of food from each of the four categories of fresh, frozen, tinned and dried.

For P4, the same assessment could continue with learners planning diets for animals selected by the tutor (at least three species) according to their life stage and specific needs. Learners then need to implement these diets (P5) once they have been checked by a tutor, again using the check sheet.

For P6, learners need to dispose of waste correctly at the end of the assessment. Evidence could be collected during practical activities through use of an observation record and/or witness statement.

For P7, learners should monitor and record the food and water intake of selected animals. This may include weighing food before and after it has been provided to the animal and recording this information. This criterion could be assessed over a period of time with a minimum of three different animal species in order that learners can make fair judgements. For P8, learners should report in a written format or as a poster presentation, on problems that are likely to occur when an animal is fed incorrectly. This should be aimed at other animal care learners or visitors.

For M1, learners need to compare how different establishments feed and water their animals, for example how animals in a zoo are scatter fed compared to animals in kennels that are fed via a bowl once a day. This should give learners an insight into the different ways of doing things and introduce them to different species.

For M2, learners need to evaluate alternative ways of monitoring and recording animals' feed and water intake, for example weighing food, weighing animals, developing feeding and watering records for a given establishment. They should then use these alternatives over a period of time and evaluate how they work in practice.

For D1, learners should justify the most appropriate food and water presentation to a minimum of three different species at varying life stages. This would ideally be project based, allowing learners to gain an insight into the costs involved in keeping animals.

For D2, learners should suggest potential reasons for changing an animal's food and water intake, and explain how these changes will affect what an animal eats and drinks. This must cover a minimum of two animals. It could be in a written format, and allow learners to research some nutritional problems and how to prevent them from occurring with animals in their care.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, P3, P4, P5, P6, M1, D1	Preparing and Providing Food and Water to Animals	You work as an assistant in an animal care centre. You are required to feed and water a variety of animals, over a period of time. This will include equipment, preparation, health and safety, type and amount of food given, how it is presented etc. You will also need to look at how things are carried out elsewhere, and make comparisons. You should then suggest changes to current feeding regimes and include cost and usability.	Practical assessment plus assignment.
P7, P8, M2, D2	Monitoring and Recording Feeding and Watering	For animals cared for at the centre, you must monitor feeding and watering and evaluate alternative ways in which this can be done. You are also required to look into the problems caused by feeding of animals incorrectly.	Practical assessment plus assignment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
CU 33.1 Prepare feed for animals CU 33.2 Provide feed and water to animals	Plan and Monitor Animal Feeding
Undertake Work Related Experience in the Land-based Industries	
Maintain Animal Accommodation	
Maintain Animal Health and Welfare	
Understand the Principles and Practices of Animal Establishments	
Contribute to the Care of Exotic Animals	

Essential resources

Learners must have access to a variety of animal resources, including:

- mammals (small and large)
- exotics
- birds
- domestic species such as cats and dogs.

The animal care centre must be appropriately stocked and equipped and adhere to all practical health and safety considerations.

The centre must have adequate feeding procedures in place that comply with both animal welfare and health and safety legislation.

Throughout delivery and assessment all animals should not be stressed and/or overused.

Employer engagement and vocational contexts

Centres are encouraged to develop links with animal collections to give learners an insight into the alternative ways of providing animals with food and water. This may be vet practices, zoos, and wildlife parks, feeding companies, farms or boarding/rescue facilities. The links could be forged through either visits to the establishments or visits from guest lecturers representing suitable organisations.

Indicative reading for learners

Textbooks

Alderton D – *You and Your Pet Bird* (Dorling Kindersley, 1995) ISBN 9780751301571

Benyon P H et al (editors) – *BSAVA Manual of Exotic Pets* (British Small Animal Veterinary Association, 2002) ISBN 9780905214474

Brown M and Richardson V – *Rabbitlopaedia: A Complete Guide to Rabbit Care* (Ringpress Books Ltd, 2000) ISBN 9781860541827

Evans J M and White K – *Catlopaedia* (Ringpress Books Ltd, 2003) ISBN 9781860540189

Evans J M and White K – *Doglopaedia* (Ringpress Books Ltd, 2002) ISBN 9781860540745

Palika L – *The Ultimate Pet Food Guide: Everything You Need to Know About Feeding Your Dog or Cat* (2008) ISBN 9781600940712

Raiti P and Girling S (editors) – *BSAVA Manual of Reptiles* (British Small Animal Veterinary Association, 2004) ISBN 9780905214757

Pond W, Pond K, Schoknecht P and Church D – *Basic Animal Nutrition and Feeding* (2005) ISBN 9780471658931

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	selecting the type and amount of foods to give to animals, planning diets according to life stages, reporting on problems with incorrect diets formulating alternatives, making comparisons, evaluating alternatives, suggesting reasons for changes
Creative thinkers	selecting and preparing equipment and foods, planning diets, following guidelines and reporting on problems formulating alternatives, making comparisons, evaluating alternatives, suggesting reasons for changes
Reflective learners	monitoring and recording feeding, following guidelines, planning diets, selecting, preparing and providing foods formulating alternatives, making comparisons, evaluating alternatives, suggesting reasons for changes
Team workers	selecting, preparing and providing foods, planning diets, monitoring and recording feeding
Self-managers	selecting and preparing food, water and equipment, planning diets, providing foods, monitoring and recording formulating alternatives, making comparisons, evaluating alternatives, suggesting reasons for changes
Effective participators	selecting and preparing equipment and foods, planning diets, following guidelines and monitoring, recording and reporting on animal feeding formulating alternatives, making comparisons, evaluating alternatives, suggesting reasons for changes.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out research activities related to feeding animals analysing information on alternative ways of feeding and recording feeding
Creative thinkers	asking questions to extend their thinking during lectures and practical sessions trying out alternative or new ways of providing food for animals adapting ideas as circumstances change, eg new equipment, new nutritional information
Reflective learners	identifying opportunities for feeding changes and their own achievements setting goals for themselves to achieve, eg conquering a fear of handling an animal reviewing progress in practical tasks and coursework

Skill	When learners are ...
Team workers	<p>working with others to feed animals and in group activities in class</p> <p>reaching clear agreements regarding who is carrying out which task</p> <p>working together when feeding animals</p>
Self-managers	<p>showing initiative and commitment to animals and their needs</p> <p>dealing with the pressures of an ill animal that is not eating</p> <p>managing emotions when it comes to animal welfare and healthcare</p>
Effective participators	<p>discussing issues of concern when feeding an animal or finding an animal in a less than ideal welfare situation</p> <p>identifying improvements to current animal feeding regimes</p> <p>influencing others in their animal feeding regimes and standards.</p>

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using ICT facilities, using smartboards and PCs in class, using interactive materials for teaching and learning, researching subjects on the internet
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none">• text and tables• images• numbers• 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, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	suggesting weights of food for animals to suit their needs, dosage of supplements per size of animal, and gathering and analysing weights of animals for healthcare evaluations
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reading material on the subject from a variety of sources for their assignment work. Learners should be encouraged to read around subjects and produce clear and concise documents using correct feeding terminology.
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	

Unit 4: Maintain Animal Health and Welfare

Unit code: L/600/9314

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to introduce learners to the skills and knowledge associated with animal health and welfare and how these can be applied in practice. It is designed for learners in centre-based settings looking to progress into the sector or onto further/higher education.

On successful completion of this unit, learners will be able to maintain the health and welfare of a range of animals. This includes identifying any signs of ill health, or signs that would suggest impending problems, and how to follow these through and fully support and monitor the animal's recovery. Learners will explore animal welfare and promote good welfare standards in day-to-day situations.

● Unit introduction

Knowledge of the health and welfare of animals is vital for anyone planning to work within the animal care sector.

Learners will develop the knowledge and skills needed to deal with both day-to-day animal health and welfare routines and animal health emergencies.

This unit covers monitoring and maintaining the health and wellbeing of animals, promoting and maintaining the welfare of animals, exploring common diseases, disorders and their prevention and treatment, and the principles and practices of animal first aid.

Learners will be involved in real-life animal health situations for this unit which will enable them to develop the skills and knowledge necessary for employment or further study in the sector. On successful completion of this unit learners will have developed knowledge of the everyday care routines to ensure animals' health and wellbeing, plus an understanding of the bigger picture when it comes to care and welfare issues.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to monitor and maintain the health and wellbeing of animals
- 2 Know how to promote and maintain the welfare of animals
- 3 Know common diseases and disorders, their prevention and treatment
- 4 Know the practices and principles of animal first aid.

Unit content

1 Be able to monitor and maintain the health and wellbeing of animals

Monitoring health: health records to include individual details of animals; date and time; visual signs of health such as eyes, ears, nose, mouth, dentition, coat/fur/feathers/skin, movement, posture, paws/hooves, and tail; appropriate frequency of monitoring

Signs of ill health: not eating/drinking; lack of normal bodily function; discharges from eyes, ears, mouth, nose; presence of unusual lumps, bumps, parasites; unusually slow movement; change in posture; swellings; not interacting with the group; loss of fur/feathers; dry skin; routine responses to abnormal and ill health observed

Wellbeing of animals: enrichment; exercise; mental and physical stimulation; access to own species; emotional needs of animals; minimising stress occurrences; medical treatments available to prevent ill health

2 Know how to promote and maintain the welfare of animals

Exercise routines: time of day to exercise; frequency of exercise; change in exercise during life stages eg young, old, ill, pregnant, lactating, working; ways to exercise; monitoring and recording of exercise times; consequences of over- and under-exercising; regime planning

Care and husbandry requirements: cleanliness; hygiene; exercise; mental stimulation; enrichment; correct feeding and watering; stocking with other animals

Current animal welfare legislation: eg Animal Welfare Act and the Five Animal Needs; Transport of Animals Order; Breeding and Sale of Dogs Act; Performing Animals Act; Dangerous Wild Animals Act; Welfare of Animals in Transit order; relationship between legislation and daily care of animals

3 Know common diseases and disorders, their prevention and treatment

Common diseases and disorders: examples of viral, bacterial, metabolic diseases, stress (signs and symptoms for selected species eg for a dog – parvovirus, kennel cough, diabetes); related causes of disease and disorders

Prevention: vaccination; diet; exercise; parasite control; stocking density; appropriate monitoring intervals

Treatments: topical; oral; injectable; supplements; limitations of treating animals in care

Immunity: role of the immune system in disease; factors affecting immunity; ways of ensuring good immunity

4 Know the practices and principles of animal first aid

Principles of first aid: rules and aims of first aid and how to apply to situations; reporting emergencies; legal limitations and implications of first aid

Practices of first aid: contents of a first aid kit; how to deal with an emergency situation; transporting the animal to the vets; lines of reporting problems; designated first aider; health and safety

First aid procedures: checking pulse, temperature, respiration; bandaging techniques, wound cleaning; resuscitation; splinting; tourniquets; dealing with shock; dealing with internal/external bleeding; dealing with owners in stressful situation

First aid situations: road traffic collision; poisoning (both internal and external); shock; fractures; sting; bite and severe allergies; seizures; eg a dog gastric dilation volvulus, colic

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 recognise signs of normal and abnormal health in animals [CT,RL]	M1 describe what to do when signs of abnormal or ill health are found in specified animals during routine health checks	D1 describe possible causes and treatments for abnormal or ill health found in specified animals during routine health checks
P2 carry out routine health checks on animals [EP,TW]		
P3 carry out appropriate, routine preventative treatments for animals [EP,TW]	M2 describe how preventative treatment works in specified animals	D2 formulate a management plan for a group of animals over time, incorporating health checks, Five Needs/ requirements, preventative treatments, exercise and husbandry regimes
P4 outline current animal welfare legislation and how this relates to daily regimes [SM]	M3 describe the relationship between the five animal needs and a given animal collection	
P5 describe the care and husbandry requirements in relation to the Five Animal Needs [TW,RL,EP]		
P6 describe common diseases, their signs prevention and treatment: <ul style="list-style-type: none">• viral• bacterial• metabolic [CT]	M4 examine how common diseases and disorders can cause stress in animals.	
P7 describe common disorders, their signs, prevention and treatments [CT]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P8 describe the contents of an animal first aid box [IE, RL]		D3 assess a given animal's first aid needs, advising on procedures and transportation for the animal.
P9 identify the main principles of animal first aid [SM]		
P10 describe first aid procedures for common animal injuries and ailments. [IE, EP]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Learners should have opportunities to practise animal health and welfare techniques with a variety of species from the following categories: exotic, small mammal, large mammal, rodent and bird. Emphasis should be on practical assessments where possible, with adequate time for learners to prepare for these assessments.

All learners should have access to the animals, with the emphasis being on health and safety and animal welfare at all times. Careful planning is needed to ensure that animals are not stressed or overused.

Learners should be encouraged to carry out independent research, to allow for guided development of research and independent thinking skills.

Tutors should also be encouraged to formulate links with external animal care organisations to provide a 'real' view of animal health and welfare. This could be via both visits to animal healthcare establishments and visits from guest lecturers who are animal healthcare professionals.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to and overview of the unit and animal care facilities on site.
Assignment 1: Animals Health and Wellbeing (P1, P2, M1, D1) Tutor to introduce the assignment brief.
Tutor-led group practical activity: visual health checks, signs of abnormal and ill health.
Theory: signs, symptoms, treatments and causes of ill health.
Assignment 2: Preventative Treatment and Management of Health (P3, M2, D1) Tutor to introduce the assignment brief.
Practical activity: preventative treatments administered to animals, and how they are administered.
Theory: types of preventative treatments for different species, how they work, health management plans.
Assignment 3: Welfare Legislation and the Five Needs (P4, M3, D1) Tutor to introduce assignment brief.
Small-group work into relevant legislation.
Theory: Five Needs and how they relate to the management of animals from day-to-day care to long-term care.
Assignment 4: Exercise and Husbandry Routines (P5, D1) Tutor to introduce assignment brief.
Theory independent study: learners to plan husbandry and exercise regimes for a variety of animals, with tutor guidance.
Practical activity: learners to carry out husbandry and exercise regimes for a variety of animals and perform an evaluation of these regimes.
Assignment 5: Disease and Disorders (P6, P7, M4, D2) Tutor to introduce assignment brief.

Topic and suggested assignments/activities and/assessment
Theory: common diseases and disorders, their signs, causes, prevention and treatments.
Practical activity: treatment of diseases and disorders.
Assignment 6: First Aid (P8, P9, P10, D3)
Tutor to introduce assignment brief.
Theory: first aid, rules and aims, limitations of procedures and reporting.
Practical activity: first aid techniques, transporting and reporting. Practical assessments.

Assessment

For P1 and P2, learners will need considerable practical experience in order to be able to determine the points of good and ill health to look for in a variety of species (P1), and check a variety of species for these signs (P2). Practical sessions to cover these criteria should be led by an animal care professional with knowledge of ill health for a variety of species in their care. Producing labelled diagrams, photographs and posters may help learners to identify signs of ill health.

For P3, learners must be able to carry out routine preventative treatments. This could be assessed at the centre depending on the number of animals they hold; otherwise it would be valid to use assessor observation records, authenticated photographs or witness testimonies from other animal care professionals as evidence of the tasks being carried out.

For P4, learners are required to outline current UK animal welfare legislation related to daily care regimes. This could be through learner-centred and guided research, and learners could produce a presentation to their peers on the legislation.

For P5, learners need to outline appropriate care and husbandry routines. This could be assessed during practical sessions, or through questioning.

For P6 and P7, learners are required to discuss common diseases and disorders, their signs, prevention and treatments. This would be best evidenced through a labelled poster aimed at animal owners and clients in a veterinary practice. There should be one species per learner and learners should have thorough access to information about relevant diseases associated with their species.

For P8, P9 and P10, learners need to discuss first aid and related factors. A practical situation or simulation is necessary for these criteria. Learners need to demonstrate how they would carry out emergency first aid in unfamiliar scenarios provided by the tutor.

For M1, learners are required to describe the process they need to go through when they have observed signs of ill health in an animal, and would be expected to describe reporting illness, isolation and quarantine, use of PPE and their own health and safety.

For M2, learners are required to describe how preventative treatment works, and they are expected to understand the basics of how antibiotics in feed, supplements and vaccinations work. Learners must cover a minimum of two different animals in M1 and M2.

For M3, learners should be able to describe the relationship between the Five Animal Needs and a given animal care collection such as an animal care unit, kennel, cattery, or pet shop. This could be a presentation to the group. To ensure fairness of assessment, the tutor should approve each individual animal collection for each learner.

For M4, learners should examine how stress can contribute to diseases and disorders. This could be a poster or information leaflet to give to people working in animal care.

For D1, learners should explain causes and treatments of ill health in animals. This could be evidenced by learners producing an essay.

For D2, learners should produce a health management plan for a group/collection of animals to incorporate legislation, exercise and husbandry

For D3, learners must assess a first aid situation and advise on transportation of the animal.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, M1, D1	Animal Health and Wellbeing	You work as a member of care staff for an animal care centre. You need to carry out a full health check on specified animals and describe how to report ill health and possible causes and treatments.	Practical assessment plus essay.
P3, M2, D1	Preventative Treatment and Management of Health	You need to produce a leaflet for clients on routine preventative treatments carried out at the centre and how they work. You must also produce a one week management plan for the animal care centre.	Assignment.
P4, M3, D1	Welfare Legislation and the Five Needs	You need to present information on the five needs and different animal welfare legislation to a group at the centre and outline how legislation is implemented in the animal care centre.	Presentation.
P5, D1	Exercise and Husbandry Routines	Produce and follow an exercise and husbandry plan for a week in the animal care centre and evaluate it with a peer.	Practical assessment plus essay.
P6, P7, M4, D2	Disease and Disorders	Produce a poster for the centre's client waiting room describing diseases and disorders for an animal, their causes, prevention and treatment.	Poster presentation.
P8, P9, P10, D3	First Aid	You are in one of the given first aid situations, and need to talk the assessor through the problem and show them what to do in this first aid situation and what equipment to use and who to report it to.	Practical assessment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
CU32.1 Support the health and welfare of animals CU34.1 Promote and maintain the health and wellbeing of animals	Understand and Promote Animal Health
Undertake Work Related Experience in the Land-based Industries	Undertake Animal Handling and Safe Working
Maintain Animal Accommodation	
Contribute to the Care of Exotic Animals	
Contribute to the Nursing of Animals	

Essential resources

Learners will require access to a resource centre with animal health and welfare books and journals, a well-stocked animal care unit, an animal first aid kit, and PPE. For presentations and lectures, it would be useful for learners to have access to ICT facilities to develop their skills.

Employer engagement and vocational contexts

Centres are encouraged to develop links with local and national animal care organisations and facilities so learners can access a variety of views and ways of doing things in the animal care sector. This could include kennels, catteries, zoos and wildlife parks, pet shops, farms, animal collections, and vets.

Learners should be encouraged to gain a variety of practical work experience within the animal care sector for this unit and the whole qualification.

Indicative reading for learners

Textbooks

Bell C – *First Aid and Healthcare For Cats* (St Edmundsbury Press, 1994) ISBN 9780718828967

Bell C – *First Aid and Healthcare For Dogs* (Lutterworth Press, 1993) ISBN 9780718828837

Dallas S – *Manual of Veterinary Care* (BSAVA, 1999) ISBN 9780905214498

Evans J M and White K – *Catlopaedia* (Ringpress Books Ltd, 1994) ISBN 9781860540189

Evans J M and White K – *Doglopaedia* (Ringpress Books Ltd, 1994) ISBN 9781860540745

Lane D R and Cooper B – *Veterinary Nursing, Volume 3* (Butterworth-Heinemann, 1998) ISBN 9780750655255

Taylor D – *Small Pet Handbook* (Collins, 1997) ISBN 9780007134489

Journals and magazines

Veterinary Nursing Times

Your Cat magazine

Your Dog magazine

Websites

Blue Cross

www.bluecross.org.uk

The British Veterinary Nursing Association

www.bvna.co.uk

DEFRA

www.defra.gov.uk

The Governing Council of the Cat Fancy

www.gccfcats.org

The Kennel Club

www.the-kennel-club.org.uk

Royal College of Veterinary Surgeons

www.rcvs.org.uk

RSPCA

www.rspca.org.uk

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	describing the contents of a first aid kit describing first aid procedures
Creative thinkers	describing signs of diseases, disorders, their treatments and prevention recognising signs of normal and abnormal health in animals
Reflective learners	describing the contents of a first aid kit recognising signs of normal and abnormal health in animals
Team workers	carrying out routine health checks on animals carrying out preventative care of animals describing exercise and husbandry routines
Self-managers	identifying principles of first aid outlining current UK animal welfare legislation
Effective participators	carrying out health checks on animals carrying out routine preventative treatments describing exercise and husbandry regimes describing first aid procedures.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out research activities related to the unit and animal health analysing information on animal health and signs of illness
Creative thinkers	asking questions to extend their thinking during lectures and practical sessions trying out alternatives or new solutions to animal health care adapting ideas as circumstances change, eg changes to animal welfare legislation
Reflective learners	identifying opportunities for animal health care changes and their own achievements setting goals for themselves to achieve, eg conquering a fear of handling an animal reviewing progress in practical tasks and coursework
Team workers	working with others to carry out health checks, exercise and husbandry routines of animals reaching clear agreements regarding who is carrying out which task working together in an emergency first aid situation

Skill	When learners are ...
Self-managers	<p>showing initiative and commitment to animals and their healthcare</p> <p>dealing with pressures in an emergency first aid situation</p> <p>managing emotions when it comes to animal welfare and healthcare</p>
Effective participators	<p>discussing issues of concern when health checking an animal or finding an animal in a less than ideal welfare situation</p> <p>identifying improvements to current animal welfare regimes</p> <p>influencing others in their animal health care regimes and standards.</p>

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	encouraged to complete their coursework using ICT facilities, using smartboards and PCs in class, using interactive materials for teaching and learning, researching subjects on the internet
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none">• text and tables• images• numbers• 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, responsibly and effectively, including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	making use of mathematics to suggest sizes of enclosures to keep animals in to suit their welfare, dosage of medication such as preventative treatments per size of animal, and gathering and analysing weights of animals for health care evaluations
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reading material on English skills from a variety of sources for their assignment work encouraged to read around subjects and produce clear and concise documents using correct animal health terminology for the unit
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	required to present information to a group of people for the unit, ideally in a classroom situation with their peers.
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	

Unit 5: Environmental and Land-based Business

Unit code: F/600/9357

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of business within the environmental and land-based business, and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or to further education and training.

● Unit introduction

Understanding how businesses and organisations fit into the land-based industry provides a foundation of knowledge from which more specialist study can follow. The environmental and land-based industries are wide ranging, covering employment in many sectors.

Learners will investigate the different types of businesses and organisations in their specialist sector of the environmental and land-based industries, their characteristics and influences. Learners will look at current trends and issues affecting their industry.

All businesses operate within a framework of statutory legislation and other codes of practice. Learners will investigate a range of UK and EU legislation that impacts on their sector and employment within it.

To operate effectively, organisations need to perform a wide range of business and administrative tasks. Learners will develop skills in performing a range of tasks concerned with finance and banking, marketing and general administration. They will also consider how information technology can be used to perform a range of these tasks.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know an industry within the environmental and land-based sector
- 2 Know the relevant legislation and codes of practice within the environmental and land-based sector
- 3 Know common business operations
- 4 Know how to carry out simple administrative tasks.

Unit content

1 Know an industry within the environmental and land-based sector

Structure: features and characteristics of the industry – size, employment, main activities, geographical influence, economic contribution; different types of businesses and organisations and the type of goods and services they provide; size of these businesses/organisations eg numbers employed, area of land, size of enterprises; any regional differences; allied industries (what they are, the goods and services they supply and the role they play); trends and issues currently affecting the industry

Principal organisations and trade associations: roles and aims of key selected organisations in the industry – statutory eg Department for Environment Food and Rural Affairs (DEFRA), Health and Safety Executive, Department for Business Innovation and Skills, Environment Agency, Food Standards Agency; non-governmental, major land-owning or representative eg The Royal Society for the Prevention of Cruelty to Animals (RSPCA), British Veterinary Association, Royal Horticultural Society, Institute of Groundsmanship, Lantra Sector Skills Council, British Horse Society, National Farmers Union, National Trust

2 Know the relevant legislation and codes of practice within the environmental and land-based sector

Legislation and codes of practice: United Kingdom legislation – consideration of the main relevant current legislation relating to an industry in the land and environment sector eg Agriculture Tenancies Act 1995, Wildlife and Countryside Act 1981, Animal Health Act 2002, The Welfare of Animals (Transport) (Amendment) Order 1999, Environment Protection Act 1990, Environment Act 1995, Control of Pesticides Regulations 1986, Riding Establishments Act 1970, Horse Passports (England) Regulations 2004, Control of Dogs Order 1992, Dangerous Dogs Act 1991; codes of practice eg Five Freedoms welfare of farm or companion animals, Code of Good Agricultural Practice; European legislation – relevant European directives eg relating to employment, the environment and the specific industry in the land and environment sector

Employment law: the main relevant current legislation relating to employment eg Health and Safety at Work Act 1974, Control of Substances Hazardous to Health Regulations 1991, Working Time Regulations 1998, Disability Discrimination Acts 1995 and 2005, Employment Act 2002, National Minimum Wage Act 1998, Race Relations (Amendment) Act 2000, Sex Discrimination Act 1975

3 Know common business operations

Common IT software: examples of business uses of word processor (eg letters, notices), spreadsheets (eg records, timesheets), database (eg records), graphics (eg advertisements, posters), email; advantages and disadvantages of using IT for business tasks

Common business tasks: financial and banking – taking payments by cash and cheque, ordering procedure for supplies, invoices, types of bank account (current, savings, business) loans, overdraft, methods of payment (cheques, standing order, direct debit, electronic/internet); marketing – ways to promote a business (advertisements, promotional events, referral/word of mouth, importance of customer care), preparation of promotional materials; administrative tasks – file documents, complete simple records (eg production, customers), check stock levels and complete stock control records, complete simple single entry cash analysis book, communicate using written and electronic media; importance of accuracy, confidentiality, security and data back up of business records

4 Know how to carry out simple administrative tasks

Preparation, presentation, sorting and retrieval of information: use of IT and paper filing systems, completion of simple business records, preparation of business documents (eg letters, advertisements)

Accounting and administrative tasks: completion of orders, invoices, cheques, complete stock records, single entry cash analysis book; purpose of accounting and administrative tasks

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the structure of one industry within the environmental and land-based sector covering: <ul style="list-style-type: none"> • size • employment • main activities • geographical influence • economic contribution [IE]	M1 explain the roles of principal organisations within an industry in the environmental and land-based sector	D1 discuss how legislation and statutory and representative organisations affect a specified business in the environmental and land-based sector
P2 identify the principal organisations and trade associations within an industry in the environmental and land-based sector [IE]		
P3 identify the main United Kingdom or European legislation and codes of practice relating to one industry within the environmental and land-based sector [IE]	M2 explain the objectives and purpose of important current United Kingdom or European legislation for the environmental and land-based industry	
P4 identify key requirements of current employment law on the environmental and land-based sector [IE]		
P5 describe how common IT software can be used in everyday business operations	M3 explain the advantages and disadvantages of using IT for common business tasks	D2 discuss the importance of accuracy, security, confidentiality and data back up when completing business tasks.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P6 state the purpose and operation of common business tasks: <ul style="list-style-type: none"> • financial and banking • marketing • administrative tasks 		
P7 use appropriate methods to prepare, present, sort and retrieve information [CT]	M4 explain the purpose of specified administrative and accounting tasks.	
P8 carry out simple accounting and administrative tasks appropriate to the business. [SM]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Delivery of this unit will involve practical and written assessments, and will have links to industrial experience placements.

In learning outcome 1 learners will study the structure of their industry. They will require the opportunity to investigate the range of businesses and their products/services, and also the ancillary businesses on which the primary businesses depend. They could relate these ideas to a specific business, while also investigating the range of businesses found locally and nationally. They will need access to any published data on the size and economic importance of their industry. Learners will also find out about the principal organisations and trade associations concerned with their industry, and will investigate the roles and impact of selected organisations. They will need support in investigating some of the key trends and issues facing their industry and how it is responding. Delivery of this learning outcome would be enriched by speakers from selected organisations.

Learning outcome 2 examines the UK and European legal framework affecting businesses in the particular land-based industry. Learners are not expected to become legal experts, but to develop an awareness of the main pieces of legislation and how they impact on business in their industry. They will need to investigate their legal rights and responsibilities as employees within the workplace.

In learning outcome 3 learners will identify how common IT software can be used to perform a range of everyday business operations. Some of these are common to all businesses (eg sending emails), but tutors should ensure that examples are vocationally relevant to the subject area of the learners. It is anticipated that delivery will include the opportunity for learners to develop their IT skills so that they gain a better understanding of the use of IT software. Learners will benefit from completing tasks using the range of software, and, by careful planning, these tasks could provide evidence for P7 and P8, for example use of word processor and graphics programmes to produce a marketing poster; a spreadsheet for stock inventory and valuation. Learners will need to find out about day-to-day business activities involving finance and banking. It would help learners to have the opportunity to study a range of records (financial and non-financial) that are kept in a specific business, and how these are maintained and used.

Learning outcome 4 links closely with learning outcome 3, and gives learners opportunity to practically engage in business operations and tasks. This should include preparing a range of business outputs using the IT applications listed, which could relate to other items in the content, eg advertisements, posters, specific records appropriate to businesses in their industry. It will be important for learners to have the opportunity to practise completion of paper-based records and ensure that both IT and paper records are filed appropriately. The importance of accuracy, confidentiality, security and regular back up of data should be stressed.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Assignment 1: Industry Structure and Organisations (P1, P2, M1)
Tutor introduces the assignment brief.
Classroom theory session and discussion: structure of an industry in the environmental and land-based sector: activities and types of business, ancillary businesses, regional variations.
Theory session: size of the industry and economic data, development of the industry and current issues.
Classroom activity: use of industry magazines, publications and internet to identify principal organisations and trade associations.
Guest speaker: role of statutory and representative organisations.
Assessment completion and support.
Assignment 2: Legislation (P3, P4, M2, D1)
Tutor introduces the assignment brief.
Theory session: UK and EU legislation and codes of practice relating to an environmental and land-based industry.
Classroom activity: importance of codes of practice.
Theory and supported research: requirements of employment law.
Visit/guest speaker: how legislation and organisations affect a business in the sector.
Assessment completion and support.
Assignment 3: Business Tasks and Operations (P5, P6, P7, P8, M3, M4, D2)
Tutor introduces the assignment brief.
Use of IT for common business tasks; application of word processor, email, spreadsheets, database and graphics software.
Financial and banking tasks – making and receiving payment, business bank accounts, ordering and invoicing.
Marketing – ways to advertise and promote a business, customer care and referral business.
Administrative – paper and electronic filing systems, stock check, business documents, simple business records, importance of confidentiality and security.
Assessment completion and support.

Assessment

For P1, learners need to describe the structure of one industry within the environmental and land-based sector. This must include the main activities and types of businesses that are found, including ancillary businesses, and regional variations. They should describe the size of the industry, making reference to any available data on employment and economic output. The evidence could be presented as a report or illustrated poster.

P2 requires learners to identify the principal organisations and trade associations within an industry in the environmental and land-based sector. Evidence should cover at least three different organisations, including one statutory, one non-governmental and one representative organisation. It should detail the name, contact details, aims and objectives of each organisation in relation to the land-based industry sector. Evidence could be a report, annotated poster, or verbal presentation.

For P3, learners need to identify the main United Kingdom or European legislation and codes of practice relating to one industry within the environmental and land-based sector. Evidence should include at least three important and relevant pieces of UK or EU legislation and/or codes of practice. It should provide the full title and date, and briefly summarise the main requirements of the legislation in relation to the industry. Evidence may be a report or guidance booklet.

For P4, learners need to identify key requirements of current employment law on the environmental and land-based sector. Evidence should include at least two important and relevant pieces of UK and/or EU legislation. It should provide the full title and date, and briefly summarise the main requirements of the legislation in relation to the industry. Evidence may be a report or guidance booklet.

P5 requires learners to explain how common IT software can be used in everyday business operations. This must cover word processor, email, spreadsheet, database and graphics software. Evidence may be a verbal or written report, poster or leaflet.

For P6, learners must state the purpose and operation of common business tasks. For financial and banking this will include how businesses make and receive payments, order supplies and raise invoices. Marketing must include suitable ways to advertise and promote a business. Administrative tasks should include paper and electronic filing, simple records relevant to the industry sector, and stock control. Evidence may be in the same format as P5.

For P7 and P8, learners must carry out simple accounting and administrative tasks appropriate to the business and use appropriate methods to prepare, present, sort and retrieve information. Evidence must include all of the content listed; some of this could be IT generated.

For M1, learners need to extend work completed for P1 and P2 to explain the roles of principal organisations within one environmental and land-based industry. Evidence should include an explanation of the roles of at least three organisations (including at least one statutory and one non-governmental) presented in the same format as P1 or P2.

For M2, learners must explain the objectives and purpose of important current United Kingdom or European legislation for the land-based industry. Evidence should cover one piece of employment legislation and one other relevant piece of legislation. These could have been used for evidence towards P3 and P4 and presented in the same format.

For M3, learners are required to explain the advantages and disadvantages of using IT for common business tasks. Evidence could be a verbal or written report, poster or leaflet.

For M4, learners must explain the purpose of four of the tasks completed for P7 and P8. The tasks could be selected by the tutor, or agreed through discussion with the learner. Evidence could be in the same format as M3.

For D1, learners need to discuss the impact of legislation and statutory and representative organisations on the industry. Evidence should consider one piece of legislation and two organisations in detail, including positive or negative impacts and ways that the legislation and organisations affect working practices in the industry.

D2 requires learners to discuss the importance of accuracy, security, confidentiality and data back up when completing business tasks. Evidence should include legal as well as practical reasons, and describe ways in which accuracy can be checked and security and confidentiality ensured. Evidence may be in the same format as M3.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, M1	Industry Structure and Organisations	You are taking part in marketing your industry sector to school leavers. You need to create a poster that gives an overview of your industry and the roles of the principal organisations and trade associations.	Poster.
P3, P4, M2, D1	Legislation	You need to produce a factsheet for someone starting a business in the industry that informs them of some basic legal requirements. Include the effect of the legislation on the business operations, and the impact of statutory and representative organisations on their working practices.	Factsheet.
P5, P6, P7, P8, M3, M4, D2	Business Tasks and Operations	You need to assist a business manager in performing a range of tasks, making use of IT. Create a guidance leaflet for the work experience student who is helping you which includes the purpose of the tasks, the advantages and disadvantages of using IT, and the importance of accuracy, security, confidentiality and data backup.	Portfolio of practical tasks and underpinning knowledge, guidance leaflet.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
Undertake Work Related Experience in Land-based Industries	Business Management in the Land-based Sector

Essential resources

Learners will need to be able to access relevant information about their industry, through personal contacts, work experience or case study visits. They will also need access to IT, administrative and accounting records for completion.

Employer engagement and vocational contexts

This unit provides opportunity for learners to gain an overview of one industry within the environment and land-based sector. They will also gain valuable experience in completing administrative and accounting tasks, including using IT. Learners would benefit from a range of guest speakers and industry visits.

Indicative reading for learners

Textbooks

Canwell D and Sutherland J – *BTEC First Business, 2nd Edition* (Nelson Thornes, 2006) ISBN 9780748783946

Carysforth C – *NVQ Level 2 Business and Administration* (Heinemann, 2006) ISBN 9780435463335

Carysforth C and Neild M – *BTEC First Business, 2nd Edition* (Heinemann, 2006) ISBN 9780435499075

Fardon, Nuttall and Prokopiw – *GCSE Applied Business* (Osborne Books, 2002) ISBN 9781872962320

Gookin D – *Word 2007 for Dummies* (John Wiley & Sons, 2006) ISBN 9780470036587

Seliet H – *BTEC Introduction to Business* (Heinemann, 2005) ISBN 9780435401214

Wang W – *Office 2007 for Dummies* (John Wiley & Sons, 2006) ISBN 9780470009239

Websites

British Equestrian Trade Association	www.beta-uk.org
British Horse Society	www.bhs.org.uk
Business Link	www.businesslink.gov.uk
Business Studies Teaching Resources	www.bized.co.uk
Country Land and Business Association	www.cla.org.uk
Department for Environment, Food and Rural Affairs	www.defra.gov.uk
Environmental regulations	www.netregs.gov.uk
Horticultural Trades Association	www.the-hta.org.uk
Lantra Sector Skills Council	www.lantra.co.uk
Meat and Livestock Commission	www.mlc.org.uk
National Farmers Union	www.nfuonline.com
UK Agriculture	www.ukagriculture.com

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	investigating the structure of an industry in the land-based sector researching organisations researching legislation affecting the sector investigating business bank accounts
Creative thinkers	presenting information about an industry using IT software to perform business operations preparing and presenting information
Reflective learners	discussing the importance of customer care discussing the importance of customer care
Self-managers	carrying out accounting and administrative tasks.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Team workers	working with others to complete a stock check
Self-managers	completing assignment work to deadlines.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using software to perform business operations
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	filing electronic information
Follow and understand the need for safety and security practices	maintaining security and back-up copies of information
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	preparing promotional material compiling a stock valuation preparing a database of business information
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	writing a business letter
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	preparing invoices
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	preparing business records
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching legislation affecting the industry
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	completing assignments on the industry, trends and issues affecting it.

Unit 6: Introduction to the Principles and Practices of Animal Behaviour and Handling

Unit code: L/600/9345

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of animal behaviour and handling and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or to further education and training.

● Unit introduction

Understanding normal and abnormal behaviour in animals is key to working in this sector. In this unit learners will identify behaviours and develop the skills needed to be able approach an animal in a way that reduces risk to the individual and distress for the animal. Learners will observe animals, interpret and record their behaviour. They will investigate the reasons behind abnormal behaviours in a range of animals. Learners will investigate the evolution of species-specific behaviours and how a variety of external and internal factors can influence behaviour.

Later learners will concentrate on animal communication, how it occurs and how it can reduce conflicts between animals. Learners will be made aware of all relevant health and safety procedures and follow animal welfare guidelines.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the difference between normal and abnormal behaviour in animals
- 2 Be able to monitor behaviour in a range of animals
- 3 Be able to handle and restrain animals safely
- 4 Know how to handle and restrain animals safely.

Unit content

1 Know the difference between normal and abnormal behaviour in animals

Normal and abnormal behaviour: signs relevant to species – sleep/wake cycles, feeding behaviour, movement and posture, communicating, activity levels, grooming; sexual behaviour; aggression; play; social interaction

Influences on behaviour: age, gender, environment; species; stocking density; husbandry; exercise; location; stressors

Signs of specific behaviours: signs relevant to species – dominance, submission, aggression, fear

2 Be able to monitor behaviour in a range of animals

Visual observation: timed observation of a solitary animal, one animal in a group of conspecifics

Recording and reporting behaviour: note range of behaviours seen eg feeding, grooming, drinking, sleeping, exercising, interaction of group animal with conspecifics eg allogrooming, play, aggression

3 Be able to handle and restrain animals safely

Approach: interpret displayed behaviour eg relaxed, fearful, aggressive

Handling and restraint: correct handling and restraint techniques for grooming, exercising, health checks; use of correct equipment; health and safety

Equipment: correct handling and restraint equipment used for species, selection of suitable equipment, correct use of equipment, consideration of effects on animal according to its life stage eg young, adult, elderly, pregnant; consideration of health status, safety and welfare

4 Know how to handle and restrain animals safely

Reduce stress: methods to reduce stress in animals during approach – voice, timing, posture, eye contact, positioning of any equipment used

PPE and equipment: range of equipment available relevant to species, methods of safe use, suitable PPE for ease of handling and safety, risk assessment, accident reporting procedures

Handling: reasons for not handling an animal eg health status, safety for animal and handler – stress, welfare, aggression

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 identify normal behaviour in animals [IE]	M1 explain how the behaviours of a group-living species can enable them to live together without conflict	D1 explain influences that cause abnormal behaviour in given scenarios
P2 describe how age, gender, and environment can influence animal behaviour		
P3 identify signs associated with the following behaviours, dominance, submission, aggression, fear		
P4 carry out visual observations of animal behaviour	M2 explain when it is safe to approach and handle specified animals	
P5 record and report on visual observations of animals [CT]		
P6 approach animals according to their displayed behaviour		
P7 demonstrate the correct handling and restraint techniques for animals in relation to grooming, exercising, health checks	M3 confidently demonstrate safe and correct handling and restraint techniques for specified animals	D2 describe the use of given equipment used to restrain animals with regard to ease of use, safety, welfare and stress reduction.
P8 demonstrate safe use of handling and restraint equipment used for animals [TW, EP]		
P9 explain how to reduce stress in an animal when approaching it [IE]		
P10 list the correct equipment and PPE used for handling and restraining animals	M4 describe the safe use of equipment and PPE for handling and restraining animals.	
P11 state when it would not be advisable to handle an animal.		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

This unit offers tutors the opportunity to use a wide range of delivery techniques. Lectures, discussions, practicals, simulation and site visits are all suitable delivery methods.

Learners will need the opportunity to observe the range of behaviours listed in the unit content and at least two animal species should be covered. In circumstances where a particular breed or species is absent, good quality video/DVD footage and television programmes could be used.

In delivering the practical aspects of this unit involving the use of animals, tutors must stress the importance of animal welfare issues and the need to manage the resource using legal methods. Health and safety issues relating to working with animals must also be stressed on a regular basis.

Appropriate work placement involving a range of species would be advantageous, but work placements should be monitored to ensure the quality of the learning experience. Learners and tutors should be aware of the requirements of this unit before any work-related activities. This will allow opportunities to gather naturally occurring evidence and information, either while on placement or carrying out rota duties in an animal unit.

Learning outcomes 1 and 2 are closely linked, covering the signs of normal and abnormal behaviour and health in animals. Delivery techniques should be varied. Learners should have access to either live animals or high quality visual/audio-visual materials (eg video taken in the field, TV materials or colour slides). Learners should visit centres where animals are held eg kennels, catteries, stables, zoos or farms. Formal lectures, discussions and presentations by learners would form part of the delivery of these outcomes. Learners will also be able to develop knowledge and skills through work placement or by working in a centre's own animal care facilities. Terminology associated with individual behaviours and health situations should be those generally accepted on a national basis.

Learning outcomes 3 and 4 are likely to be delivered through a series of formal lectures, demonstrations and supervised practical sessions. Learners will also be able to develop knowledge and skills through work placement or by working in a centre's own animal care facilities. Visiting expert speakers could be relevant here. For example, an animal welfare officer or animal keeper could talk about their work and the methods they use.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Theory sessions: normal and abnormal behaviours, reducing conflict.
Introduce visual signs of specific behaviours, discuss and give examples.
Theory and practical sessions related to P1, P2, P3, P4, P5, M1, D1.
Assignment 1: Identifying and Recording Animal Behaviour (P1, P2, P3, P4, P5, M1, D1)
Tutor introduces assignment brief.

Topic and suggested assignments/activities and/assessment

Undertake completion of assignment under tutor guidance and using self-directed study – animal behaviour signs and monitoring, normal and abnormal behaviours, influences on behaviour.

Assignment 2: Handling and Restraint (P6, P7, P8, P9, P11, M2, M3)

Tutor introduces assignment brief.

Theory sessions – approaching animals, appropriate handling and restraint techniques for different animals.

Practical sessions – approaching animals, appropriate handling and restraint techniques for different animals.

Complete assignment under tutor guidance and using self-directed study.

Theory sessions: PPE.

Practical sessions related to use of PPE in different situations.

Assignment 3: PPE (P10, M4, D2)

Tutor introduces assignment brief.

Complete assignment under tutor guidance and using self-directed study.

Assessment

To achieve a pass grade, learners must successfully achieve all the pass assessment criteria.

For P1, learners must be able to identify the signs of normal behaviours in animals. Evidence for this could be annotated posters or an illustrated presentation.

P2 requires learners to investigate how factors such as age, gender and the environment affect the behaviour of animals. Evidence could be in the same format as for P1.

For P3, learners must identify the visual signals for the range of behaviours listed. This can be through observation of actual animals or video footage. Learners will need the opportunity to see the range of behaviours and evidence could be via commentary or presentation.

Criteria P4 and P5 require learners to observe an animal and record and report on its behaviours. At least two species should be observed. Evidence could be in written format either as a table or bullet points, or short essay.

For P6, learners need to approach an animal according to its behaviour. They should identify whether the animal is safe to approach based on their observations. This could be linked to P9 as learners can explain what they are doing to reduce stress in the animal while approaching it. Evidence for these criteria could be a commentary as the learner is approaching the animal. Tutors must ensure health and safety and animal welfare guidelines are followed at all times.

Criteria P7, P8, P10 and P11 all relate to the handling and restraint of animals. Learners are required to use correct methods and equipment, including PPE, and understand the circumstances when it would not be advisable to handle an animal. This could be assessed as a practical, with the learner covering the knowledge verbally. Again, tutors must ensure health and safety and animal welfare guidelines are followed at all times.

M1 requires learners to explain the range of behaviours which allow group-living animals to avoid conflict. Evidence for this could be an illustrated essay or illustrated presentation. By extension, D1 could be assessed as part of this.

M2 is linked to P6. Learners must explain when it is safe to approach and handle a minimum of three different animals based on observations of their behaviour. Learners could be invited to comment on a range of pictures or media footage showing different animal behaviours or this could be achieved by approaching animals and giving a commentary.

Both M3 and M4 could be assessed during practical activities using appropriate evidence such as observation records and/or witness statements.

D2 asks learners to describe the use of different types of equipment used to handle and restrain animals. This should include a minimum of three pieces of equipment. They should be able to identify the circumstances in which each piece of equipment can be used and how effective it would be compared to any alternative. An illustrated essay or presentation can be used as evidence.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P1, P2, P3, P4, P5, M1, D1	Identifying and Recording Animal Behaviour	You work at a wildlife collection. You are to observe a range of animals and identify their behaviour, state whether it is normal or abnormal and describe how age, gender and the environment have influenced the behaviour. In a group-living species you need to explain the behaviours they use to reduce conflict. During one of your observations you need to record the behaviours you see and report on the kind of behaviours they are.	Practical plus written evidence to include some or all of the following: <ul style="list-style-type: none"> • annotated poster • illustrated presentation • tables • short essay.
P6, P7, P8, P9, P11, M2, M3	Handling and Restraint	For this assessment you need to approach an animal and comment on its behaviour as you approach it. You then need to handle the animal and restrain it either for grooming, exercising or a health check. You must use the correct equipment. Then write a short essay or give a presentation on the safe approach and handling of animals including reduction of animal stress.	Practical plus written evidence to include some or all of the following: <ul style="list-style-type: none"> • annotated poster • illustrated presentation • commentary • tables • short essay.
P10, M4, D2	PPE	For this assessment you need to list the types of PPE equipment you should use for a variety of species and situations. Evaluate at least three different types of PPE available and compare how useful and effective each one is in three situations and for three different species.	Written evidence to include any or all of the following: <ul style="list-style-type: none"> • illustrated essay • illustrated presentation • commentary during a practical.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite.

Level 2	Level 3
CU 32.2 Handle animals CU 45.1 Control and restrain animals	Undertake Animal Handling and Safe Working
Undertake Work Related Experience in the Land-based Industries	
Maintain Animal Health and Welfare	
Introduction to Animal Breeds and Grooming	
Contribute to the Care of Exotic Animals	
Contribute to the Nursing of Animals	

Essential resources

Learners will need access to the range of animals and equipment detailed in the unit content. Relevant television programmes can be used to give learners the opportunity to observe the required range of behaviours.

Any work placements in animal establishments will enhance the learning experience.

Employer engagements and vocational contexts

Centres are encouraged to develop links with local animal establishments to facilitate work placements, such as kennels, catteries or pet shops, and enhance learner experience in this unit.

Indicative reading for learners

Textbooks

Bradbury J and Vehrencamp S – *Principles of Animal Communication* (Sinauer Associates Inc, 1998)
ISBN 9780878931002

Domjan M – *The Principles of Learning and Behaviour, 5th Edition* (Wadsworth Publishing Company, 2005)
ISBN 9780534605902

Manning A and Dawkins M – *An Introduction to Animal Behaviour* (Cambridge University Press, 1998)
ISBN 9780521578912

Journals and magazines

Animal Behaviour

Applied Animal Behavioural Science

Your Cat magazine

Your Dog magazine

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	identifying behaviour in animals researching information on animal handling
Creative thinkers	producing ideas for a display
Team workers	working in a small group to produce a display on animal behaviour and handling
Effective participators	working in a small group to produce a display on animal behaviour and handling.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	researching information
Creative thinkers	producing information in a variety of formats (presentations, leaflets, posters, displays)
Reflective learners	analysing their contribution to group work activities
Team workers	participating in group work to produce a display
Self-managers	managing their time to meet assessment deadlines
Effective participators	participating in group work to produce a display.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using ICT systems to research information for the assignments
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	action planning and monitoring work that needs to be completed
Manage information storage to enable efficient retrieval	saving information into files and folders
Follow and understand the need for safety and security practices	safely using ICT systems – sitting correctly at the computer, keeping food and drink away from computer equipment
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	carrying out research for assignments
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	planning which information to select and use for the presentation and/or display
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing materials for a display, incorporating relevant illustrations and/or images, producing a behaviour chart
Bring together information to suit content and purpose	creating documents from their research for assessment activities
Present information in ways that are fit for purpose and audience	producing a presentation, display, article and written report
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	

Skill	When learners are ...
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	taking part in class discussions
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading documents which relate to their assessment activities
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing documents for their assessment activities: posters, handouts, leaflets and display.

Unit 7: Understand the Basic Principles of Animal Biology

Unit code: T/600/9341

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of animal biology. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Animal care and management is a growing industry. Those who work with animals need to have an understanding of their biology in order to manage them successfully. Understanding animal biology is important to many aspects of the animal care industry, not just the animal health sector. It is important for all animal care workers to understand basic animal biology and the healthcare implications when an animal shows signs of ill health or when its health is compromised.

Biology is the science of life and living organisms, showing us how animals breathe, grow, live and reproduce. The study of cells, tissues, systems and structures provides the key to many different aspects of animal care and an understanding of how animal bodies work.

Learners will begin by considering the functional characteristics and structure of animal cells. They will then investigate how animals are able to grow, live and reproduce. This includes investigating how animals obtain their energy, the systems involved and how heritable characteristics are passed on to the next generation.

On completion of the unit learners will have an understanding of the main concepts of animal biology, which they will be able to relate to the health of animals in their care.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the structure and function of animal cells
- 2 Know the requirements for nutrition and growth in animals
- 3 Know the structure and function of the main biological systems in animals
- 4 Know the processes of reproduction and heredity in animals.

Unit content

1 Know the structure and function of animal cells

Classification of organisms: characteristics of living organisms; binomial nomenclature (systematic classification, genus, species); identification keys

Cell biology: general structure of animal cells; function of the cell wall and main organelles (eg nucleus, mitochondria, ribosomes, endoplasmic reticulum); main differences between cells in multicellular organisms and those in unicellular organisms; tissue types eg epithelial and connective; diffusion and osmosis

2 Know the requirements for nutrition and growth in animals

Nutrition and growth of animals: requirement for nutrition eg to maintain health, to grow, to reproduce, to move

Function and sources of nutritional components: sources eg water, carbohydrates, fats, proteins, minerals and vitamins; cellular respiration; types of animal feed and their constituents

Ruminant and non-ruminant digestive and excretory systems: structure of; function of; main differences between ruminant and non-ruminant digestive and excretory systems

3 Know the structure and function of the main biological systems in animals

Biological systems: skeletons and movement; endocrine (hormone); nervous; transport and circulatory; respiratory; diffusion; osmosis; system interrelationships

4 Know the processes of reproduction and heredity in animals

Reproduction in animals: life cycles; asexual and sexual reproduction; methods of reproduction; structure and function of reproductive systems

Heredity in animals: cell division; chromosomes; genes; alleles; recessive and dominant; characteristics; simple monohybrid crosses (single factor)

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the classification of living organisms [IE]	M1 identify a specified organism using an identification key	D1 explain the importance of osmosis to living organisms
P2 describe the structure and function of animal cells [IE]		
P3 describe the structure and function of animal tissues [IE]		
P4 identify the function and sources of nutritional components [IE]		
P5 describe the requirements for nutrition to: <ul style="list-style-type: none"> • maintain health • growth • reproduction [IE]		
P6 describe the structure and function of ruminant and non-ruminant digestive and excretory systems [IE]	M2 explain how two selected body systems are interrelated	D2 evaluate the main differences between ruminant and non-ruminant nutritional requirements
P7 identify the structure and function of the bones, joints and muscles in the body of an animal [IE]		
P8 outline the structure and function of the mammalian endocrine and nervous systems [IE]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P9 outline the structure and function of the mammalian respiratory and circulatory systems [IE]		
P10 describe the structure and function of the mammalian reproductive system [TW, EP]		D3 compare the advantages and disadvantages of asexual and sexual reproduction in animals.
P11 describe methods of reproduction in animals [TW, EP]		
P12 identify how characteristics in animals are passed from one generation to the next. [TW, EP]	M3 describe the life cycles of two specified species.	

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Delivery of this unit will be through formal lectures, discussion, practical laboratory assessments and written assessments.

Learning outcome 1 requires learners to know the structure and function of animal cells and tissues. It also covers how animals are classified. Learners can work in small groups to identify the characteristics of living organisms and use identification keys to identify specified organisms. Live, dead and/or high quality audio-visual materials can be used. Light microscopes, electron micrographs and pre-prepared slides of cells and tissues could be used to deliver the structure and function of cells and tissues.

The nutrition and growth of animals, as covered by learning outcome 2, is likely to be delivered through formal lectures, discussions and practical activities. Learners could monitor their own diets, identifying what we need to eat to stay healthy and how different nutritional components function. Learners could apply these concepts to two animal species (one ruminant and one non-ruminant). They could monitor two animal species from birth to two or three months of age and collect data (for example size and weight). Learners could relate this to the growth rates of animals and the required nutrition. A simple practical activity could be where learners analyse animal feed samples to see whether or not they contain protein, fat, sugar and starch. This could then be related to the nutritional requirements of animals. Learners need to describe the structure and function of ruminant and non-ruminant digestive and excretory systems and evaluate the differences between their nutritional requirements. This could be the same animals used to look at growth rates.

Learning outcome 3 requires learners to know the main biological systems of animals; their structures and functions. This could be delivered using formal lectures, audio-visual material, worksheets, microscopy and practical work. Learners could examine the internal structures of animals using pre-prepared slides and models. Dissection would also be a good activity to put the body systems into context.

Learning outcome 4 covers reproduction and heredity in animals and is likely to be delivered through formal lectures, discussion, learner research and the use of audio-visual materials. For the life cycles, learners could choose an animal and an animal that parasitizes it, in order to appreciate the link between the two (for example dog and flea, sheep and liver fluke).

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to the unit and programme of assignments.
Assignment 1: Cells, Tissues and Classification (P1, P2, P3, M1)
Tutor introduces the assignment brief.
Formal tutor input – classification, structure and function of cells and tissues, identification keys.

Topic and suggested assignments/activities and/assessment
Grouping animals together activity – worksheet completion.
Using pre-prepared slides and electron micrographs – draw and label animal cells.
Using pre-prepared slides and electron micrographs – draw and label animal tissues.
Use an identification chart to identify a specified organism.
Learner research – structure and function of cells and tissues.
Produce information for display in the classroom.
Assignment 2: Nutrition and Growth in Animals (P4, P5, P6, D2)
Tutor introduces assignment brief.
Formal tutor input – sources and functions of nutritional components, cellular respiration, ruminant and non-ruminant digestive and excretory systems.
Complete worksheets to monitor own diet.
Class discussion identifying nutritional components.
Monitor animals and collate data relating to size and weight.
Plot animal growth rate on charts.
Practical analysis of food samples.
Learner research – nutritional components, cellular respiration ruminant and non-ruminant digestion and excretion.
Prepare and present information for assessment.
Assignment 3: Animal Body Systems (P7, P8, P9, M2, D1)
Tutor introduces assignment brief.
Formal tutor input – animal body systems, importance of osmosis.
Complete worksheet to identify structure and function of bones of the mammalian skeleton, joints and muscles.
Complete worksheet to outline the structure and function of the mammalian endocrine system.
Complete worksheet to outline the structure and function of the mammalian nervous system.
Complete worksheet to outline the structure and function of the mammalian respiratory system.
Complete worksheet to outline the structure and function of the mammalian circulatory system.
Class discussion to identify and explain how two body systems are interrelated.
Complete worksheet on cellular respiration.
Complete osmosis in potatoes practical activity.
Learner research – animal body systems, importance of osmosis.
Prepare and present information for assessment.
Assignment 4: Reproduction and Heredity in Animals (P10, P11, P12, M3, D3)
Tutor introduces assignment brief.
Formal tutor input – structure and function of reproductive systems, methods of reproduction in animals, how characteristics are inherited, animal life cycles, advantages and disadvantages of asexual and sexual reproduction, monohybrid crosses.
Complete worksheet on structures involved in reproductive system.
Complete worksheet on functions of reproductive system.
Complete worksheet on methods of reproduction.
Learners to research definition of terms used in genetics.
Complete worksheet on monohybrid crosses.
Learner research – structure and function of reproductive systems, methods of reproduction in animals, how characteristics are inherited, animal life cycles, advantages and disadvantages of asexual and sexual reproduction.
Prepare and present information display.

Assessment

For P1, learners will need to describe the classification of living organisms. Learners could produce an illustrated chart/poster which shows how animals are classified.

For P2, learners are required to describe the structure and function of animal cells and for P3 describe the structure and function of animal tissues. This information could also be produced as an illustrated poster as part of a display.

For M1, learners must use an identification key accurately to identify a specified organism.

For P4, P5, P6 and D2, learners should choose one ruminant and one non-ruminant animal. The evidence produced could be in the form of information leaflets aimed at animal carers. Learners will need to provide information which identifies the function and sources of nutritional components and describes the requirements for nutrition to maintain health, and for growth and for reproduction. A laboratory practical could be included to analyse the nutritional components of animal feed.

For P6, learners will need to describe the structure and function of ruminant and non-ruminant digestive and excretory systems and for D2 evaluate the main differences between the nutritional requirements of ruminants and non-ruminant animals.

For P7, P8 and P9, learners could produce a set of illustrated handouts or a handbook which identifies the structure and function of the bones of the mammalian skeleton and the joints and muscles in the body of the animal, and outlines the structure and function of the endocrine, nervous, respiratory and circulatory systems. It is not expected that learners will go into great depth at this level, but that they will know the main organs and structures and functions of the main body systems. For M2, learners should then be able to explain how two different body systems are interrelated. For D1 learners must explain the importance of osmosis to living organisms. Following a practical activity on osmosis, learners could incorporate this information into their handouts/handbook.

For P10, P11, P12 and D3, learners, working in small groups, could produce an illustrated display about animal reproduction. This must include a description of the structure and function of the reproductive system and a description of the methods of animal reproduction. Learners should be able to complete a monohybrid cross, which can be incorporated into the display. A glossary of terms used in genetics (for example monohybrid, recessive, dominant) could be produced. For M3 learners need to describe the life cycles of two given species. Tutors should select appropriate contrasting species or agree this in discussion with learners. Evidence could be in the form of a poster or presentation. For D3, learners must compare the advantages and disadvantages of asexual and sexual reproduction. This could be in the form of a simple table which can be used in the display.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P1, P2, P3, M1	Cells, Tissues and Classification	You are working for the education department of a large animal welfare organisation. The organisation provides animal healthcare services, animal rescue (domestic and wild) and adoption facilities. Produce two illustrated posters for display in the reception area. On the first poster, produce a chart which shows how animals are classified, using examples. On the second poster show the structure and function of animal cells and tissues. The rescue service comes into contact with a variety of animals (vertebrate and invertebrate) which you need to be able to identify. Using an identification key, identify a specified organism.	Written evidence, use of identification keys.
P4, P5, P6, D2	Nutrition and Growth in Animals	Produce a set of information leaflets, aimed at animal carers, which shows the functions and sources of the nutritional components required by animals. Provide a description of the nutritional requirements, taking into account maintenance for health, growth and reproduction. Include a description of the digestive and excretory systems for one ruminant and one non-ruminant animal and evaluate the main differences between their nutritional requirements. In the final section of your leaflet, explain the importance of cellular respiration in maintaining animal health.	Written evidence.
P7, P8, P9, M2, D1	Animal Body Systems	Produce a set of handbooks or a handbook, aimed at new trainees at the organisation, which identifies the structure and function of the bones of the mammalian skeleton, joints and muscles in the body of an animal and the structure and function of the mammalian endocrine, nervous, respiratory and circulatory systems. Include an explanation of how two of these body systems are interrelated and an explanation of why osmosis is important to living organisms.	Written evidence.

Criteria covered	Assignment title	Scenario	Assessment method
PI0,PI1,PI2,M3,D3	Reproduction in Animals	With a small group of your colleagues, you have been asked to produce a display for the reception area of your organisation. The information on your display could be in the form of posters, videos and information leaflets. You need to provide a description of the structure and function of the reproductive system and a description of the methods of reproduction. Produce a comparison of the advantages and disadvantages of asexual and sexual reproduction. Choose two animal species and produce an illustrated description of the life cycles of each. Produce a leaflet for your display which identifies how characteristics are inherited, with an example of a monohybrid cross. Include a glossary of terms used in genetics.	Written evidence. Production of display (written, visual, video).

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC environmental and land-based sector suite. This unit has particular links with the following unit title in the environmental and land-based suite:

Level 2	Level 3
Element LP48.1 Promote and maintain the health and well-being of livestock Element LP25.1 Deliver basic treatments to livestock	Understand the Principles of Animal Biology
Maintain Animal Accommodation	
Maintain Animal Health and Welfare	
Introduction to the Principles and Practices of Animal Behaviour and Handling	
Contribute to the Nursing of Animals	

Essential resources

Learners will need identification keys relevant to the species being studied, plus pre-prepared microscope slides, electron micrographs of cells and tissues and animal models (for example skeletons, internal organs). They will also need access to sufficient laboratory and library resources, multimedia computers and the internet.

Employer engagement and vocational contexts

Links with animal establishments with respect to animal biology, such as laboratories, vets and animal health establishments will enhance delivery of this unit.

Indicative reading for learners

Textbooks

Dallas S – *Animal Biology and Care* (Wiley Blackwell, 2006) ISBN 9781405137959

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

Evans J M White K – *Doglopaedia* (Ringpress Books Ltd, 2006) ISBN 9781860540745

Mackean D G – *GCSE Biology* (Hodder Murray, 2002) ISBN 9780719586156

Master J and Martin C – *Animal Nursing Assistant Textbook* (Butterworth-Heinmann, 2006)
ISBN 9780750688789

Potter S – *GCSE A–Z Biology Handbook* (Hodder Arnold, 1999) ISBN 9780340753576

Roberts M BV – *Biology for Life* (Nelson Thornes, 2000) ISBN 9780174480969

Websites

GCSE Bitesize www.bbc.co.uk/schools/gcsebitesize/biology

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	identifying animals using an identification key researching information for nutrition and growth and animal body systems
Creative thinkers	producing ideas for a display
Team workers	working in a small group to produce a display on reproduction
Effective participators	working in a small group to produce a display on reproduction.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	researching information
Creative thinkers	producing information in a variety of formats (presentations, leaflets, posters, displays)
Reflective learners	analysing their contribution to groupwork activities
Team workers	participating in groupwork to produce a display
Self-managers	managing their time to meet assessment deadlines
Effective participators	participating in groupwork to produce a display.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using ICT systems to research information for the assignments
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	action planning and monitoring work that needs to be completed
Manage information storage to enable efficient retrieval	saving information into files and folders
Follow and understand the need for safety and security practices	safely using ICT systems – sitting correctly at the computer, keeping food and drink away from computer equipment
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	carrying out research for assignments
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	planning which information to select and use for the presentation and/or display
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing materials for a display, incorporating relevant illustrations and/or images, producing a growth rate chart
Bring together information to suit content and purpose	creating documents from their research for assessment activities
Present information in ways that are fit for purpose and audience	producing a presentation, display, article and written report

Skill	When learners are ...
Mathematics	
Draw conclusions and provide mathematical justifications	interpreting growth rate chart
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	taking part in class discussions
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading documents which relate to their assessment activities
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing documents for their assessment activities: posters, handouts, leaflets and display.



Unit 8: Participate in Providing Estate Maintenance

Unit code: Y/600/9364

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of estate skills and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Developing skills in estate maintenance is fundamental for learners studying any land-based qualification. Workers in many different jobs need to be able to carry out construction, maintenance and repair work on a variety of structures and surfaces. This unit develops these practical skills, together with the required underpinning knowledge.

This unit aims to develop practical skills in the use of hand tools and equipment, together with those required to maintain boundaries and surfaces or habitats in the context of the industry sector being studied by the learner. Learners will work both independently and in group situations to refine their individual skills and abilities.

Throughout this unit learners will be made aware of the health and safety implications of the work they are carrying out and its possible impact on the environment. They will learn the importance of risk assessment, keeping themselves and those around them safe and using personal protective equipment. They will also gain an overview of environmental and health and safety legislation and the consequences of not adhering to these.

On the achievement of this unit, learners will be able to complete a variety of basic maintenance and repair tasks, demonstrating awareness of health and safety and working with due regard to the environment around them. This unit will prepare the learner for work in a variety of vocational jobs within the land-based sector and will provide a sound foundation for further study at a higher level.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to select, transport and use a range of hand tools and equipment for estate maintenance
- 2 Be able to maintain estate boundaries
- 3 Be able to maintain surfaces or habitats
- 4 Know how to work safely and minimise environmental damage.

Unit content

1 Be able to select, transport and use a range of hand tools and equipment for estate maintenance

Selection of hand tools and equipment: for maintenance tasks eg hammer, spanner, saw, spade, shovel, yard brush, fork, rake, loppers, secateurs, shears, pickaxe, wire cutters, wire strainers, trowel, mallet, half moon edging iron, bolster chisel, paint brush, wheelbarrow, string line, tape measure, ladder, spirit level, fence post driver

Tool and equipment use: safe methods of use, checks and maintenance, safe manual handling, tool and equipment transportation, safe storage

Safety: current legislation eg Health and Safety at Work Act 1974, safe working practices including manual handling techniques and working distances; personal protective equipment (PPE), risk assessment

2 Be able to maintain estate boundaries

Boundaries: relevant to the land-based sector being studied eg hedgerows, walls (eg retaining, free standing, dry-stone), ditches, canal/river banks, fencing (eg post and rail, chestnut paling, chain link, post and wire, electric, panel, closeboard, temporary, security, picket, rabbit, deer, hurdle, trellis)

Maintenance and repairs: pre maintenance checks, relevant safe routine maintenance and repair techniques using correct tools and equipment (eg trimming hedges, clearing ditches, restoring banks, repairs to walls and fences), safe working practices, correct disposal of waste, personal protective equipment (PPE), risk assessment

3 Be able to maintain surfaces or habitats

Surfaces: relevant to the land-based sector being studied eg woodchip, concrete, gravel, soil, stone, grass, paving eg block, slab; sand, rubber, bitumen, decking, resin, temporary

Habitats: relevant to the land-based sector being studied eg woodland, scrub, grassland, marsh, salt marsh, sand dune, fen, heathland, mire, bog, flush, swamp, standing water, running water, arable land

Maintenance or repairs: pre maintenance checks, relevant safe maintenance and repair techniques using correct tools and equipment (eg adding surface, applying a surface treatment, clearing or restoring a habitat), safe working practices, correct disposal of waste, personal protective equipment (PPE), risk assessment

4 Know how to work safely and minimise environmental damage

Health and safety legislation: relevant current legislation eg Health and Safety at Work Act 1974, Reporting of Incidents, Control of Substances Hazardous to Health (COSHH) 2002, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR); reasons for legislation, accident reporting, consequences of accidents at work, personal protective equipment (PPE), risk assessments, safe manual handling techniques

Environmental legislation and codes of practice: relevant current legislation and codes of practice eg Environment Act 1995, Environmental Damage and Liability Regulations 2009, Waste Management (England and Wales) Regulations 2006; reasons for legislation and codes of practice; role of relevant authorities eg Environment Agency, local authorities

Problems presented by services: risk of damage to pipes (eg water, gas, sewage), cables (eg telephone, electricity); location of pipes and cables; methods to locate pipes and cables; disconnection of services; planning work to avoid pipes and cables; lack of services for work completion (eg water, telephone, electricity)

Environmental damage: pollution (to water courses, through litter or debris, noise); damage to habitats; wastage of resources; ways of minimising damage

Waste disposal: safe disposal of organic waste, eg recycling, composting, chipping, burning; safe disposal of inorganic waste eg recycling, discarding safely, landfill

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 select appropriate tools and equipment for specific estate maintenance tasks [SM]	M1 explain the importance of correct tool selection, transport, usage and maintenance	D1 discuss the purpose of practical work completed, suggesting further maintenance work required
P2 lift tools and equipment safely using appropriate techniques [TW, SM]		
P3 transport and use tools and equipment safely [TW, SM]		
P4 maintain and store tools and equipment according to instructions [TW, SM]		
P5 assess the condition of boundaries to determine maintenance requirements [CT]	M2 plan and carry out the maintenance and repair tasks to agreed timescales and specification	
P6 carry out routine maintenance of boundaries safely [TW, SM]		
P7 carry out routine repairs of boundaries safely [TW, SM]		
P8 dispose of waste materials in line with instructions [TW]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P9 assess the condition of surfaces or habitats to determine the maintenance requirement [CT]	M3 plan and carry out the maintenance or repair tasks to agreed timescales and specification	
P10 carry out appropriate maintenance or repairs of surfaces or habitats [TW, SM]		
P11 state the current environmental and health and safety legislation and codes of practice [RL]	M4 explain the importance of planning estate maintenance work.	D2 discuss how to plan and carry out specified estate maintenance tasks to overcome problems and demonstrate responsible working practices.
P12 describe how to overcome problems presented by services [IE, EP]		
P13 describe how environmental damage can be minimised [IE, TW, EP]		
P14 describe how organic and inorganic waste may be disposed of. [IE, TW, EP]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

The delivery of this unit is likely to have a highly practical content, with learners given sufficient time to develop their practical skills. Delivery of the underpinning knowledge is likely to involve a range of techniques, including classroom-based sessions, visits, guest speakers and links to appropriate work experience.

Health and safety and environmental protection should be covered at the beginning of this unit as this will allow the learner to develop underpinning knowledge of the possible hazards and risks involved in their practical activities. The use of a safety officer or an outside speaker would be able to back up theory with up-to-date legislative requirements and also indicate service providers. A clear link to risk assessments should follow so they can be completed prior to undertaking practical tasks. Tutors should be up to date on the key aspects of legislation and ensure that practical activities are carried out safely and legally. Learners should understand how laws affect them while working practically both in the centre and in the workplace.

When using hand tools the tool should be set in context of the industry being studied. It is expected that tutors will cover all tools listed while working practically. This can be achieved by demonstration, supervised practical activities and observation however, if this is not possible the tool should be identified and examples of use given. Safe use, storage and transportation of tools can be achieved through practical activities and observations within the tool shed/workshop and should be backed up with care and maintenance tasks.

The estate maintenance of boundaries, surfaces and habitats are closely related to their delivery. The techniques of this delivery should be varied, but must be practically based to meet the criteria. Learners should have the opportunity to identify different types of boundaries, surfaces or habitats which are already established in order to link theory and practice. This may have to be achieved on visits to different businesses within their own area of study. Learners will also need access to practical areas where they can put into practice those skills learnt in the classroom. It is essential that learners understand the importance of the environmental issues that surround their practical tasks and deal with waste accordingly throughout their work.

It is expected that learners will investigate the uses of boundaries fully, identifying the purpose of those maintained in earlier tasks. During classroom-based lessons, active problem-solving tasks can be used to cover all listed problems that may occur during estate maintenance activities in the unit content. Learners should have access to a range of path materials to cover both fluid and hard components. Those that cannot be practically accessed should be identified while on visits or via research.

Learners may have the opportunity to contribute to the maintenance of boundaries, surfaces or habitats while on work placements. They should be encouraged to ask for observation records and/or witness statements to be provided as evidence. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Tutors should not expect learners to do physical tasks that are beyond their physical capabilities.

Tutors could integrate the delivery, private study and assessment relating to this unit with any other relevant units and assessment instruments in the learners programme of study.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Assignment 1: Being Safe and Considering the Environment (P11, P12, P13, P14, M4, D2)
Tutor introduces the assignment brief.
Theory based sessions: introduction to health and safety to develop underpinning knowledge of the possible hazards and risks involved in their practical activities. Accident reporting, consequences of accidents at work, personal protective equipment (PPE), risk assessments, safe manual handling techniques.
Practical: carrying out a risk assessment.
Theory-based sessions: theory-based sessions current environmental legislation and codes of practice, environmental protection and waste disposal.
Site visit: potential problems presented by services, disposing of waste, environmental good practice.
Personal study, assessment completion and support.
Assignment 2: Tools and Equipment (P1, P2, P3, P4, M1)
Tutor introduces the assignment brief.
Theory session: introduction to tools, types and purpose.
Practical sessions: selecting tools and equipment for tasks.
Theory session: safe lifting principles, how to apply in practice, how to transport safely.
Practical sessions: safe lifting and transport of tools and equipment.
Theory: maintenance and storage of tools and equipment, reasons why important, how to carry out checks and maintenance.
Practical sessions: maintenance and storage of tools and equipment.
Assignment 3: Boundary Maintenance (P5, P6, P7, P8, M2)
Tutor introduces the assignment brief.
Theory session: assessing maintenance needs and purpose of boundaries, types of maintenance and repair for different boundary types.
Visits to see examples of different boundaries and maintenance required.
Practical demonstrations, activities and assessments on boundaries.
Assignment 4: Surface or Habitat Maintenance (P9, P10, M3, D1)
Tutor introduces the assignment brief.
Classroom session: types of surface and habitat.
Practical session: assessing condition of surfaces/habitats.
Theory session: planning maintenance of surfaces/habitats.
Practical sessions: maintenance and repair of surfaces/habitats.

Assessment

Learners will need to meet all pass criteria to successfully complete this unit.

Assessment of P1, P2, P3, P4 could be linked. Learners are required to demonstrate the selection (P1), safe lifting (P2), transportation and use (P3) and maintenance (P4) of at least four hand tools or pieces of equipment. Evidence for this criterion should be linked to the work being done for P6, P7, P8 and P10. The range of hand tools provided for evidence will therefore vary in relation to the work that is being carried out for these criteria during practical activities. Suitable evidence from guided activities would be observation records completed by the learner and tutor. If assessed during a placement, witness statements should be provided by a suitable representative and verified by the tutor. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

For P5, learners need to assess the condition of boundaries for maintenance requirement; assessment could be in the form of individual oral questioning or maintenance planning sheets. A minimum of two boundaries should be included. These may be selected by the tutor or agreed through discussion with the learner.

Assessment of P6, P7 and P8 could, as indicated above, be linked with P1, P2, P3, P4 with suitable projects and with assessment evidence in the same format. It is expected that learners will work with at least two different boundaries, for assessment purposes, from the unit content list.

For P9 learners are required to assess the condition of surfaces or habitats for maintenance requirement; assessment could be in the form of individual oral questioning or maintenance planning sheets. A minimum of two surfaces or habitats should be included. These may be selected by the tutor or agreed through discussion with the learner.

Assessment of P10, could be linked with P1, P2, P3, P4 with suitable projects. It is expected that learners will work with at least two different surfaces or habitats, for assessment purposes, from the unit content list.

For P11, learners will be expected to state current health and safety and environmental legislation and codes of practice. Learners should investigate various levels of the laws relating to the individual, other employees and the employer. Evidence for this could take the form of a pictorial presentation with notes, using appropriate software, flipcharts or OHPs, an annotated poster or leaflet, or as answers to short answer questions.

For P12, learners will need to know the services they may encounter while carrying out estate maintenance work, describe problems these present and how these could be overcome. Evidence could be a written or verbal report, or annotated plans of an area showing services and how problems may be overcome.

For P13, learners need to describe how environmental damage can be minimised. A leaflet, annotated poster or project can be used, and could be linked to assessment for P4.

For P14, learners need to identify and describe a range of methods for disposing of organic and inorganic waste. Evidence should bear in mind the legislative controls, and the desire to minimise environmental damage. Evidence could be in the same format as for P3.

In addition to the pass criteria above learners wishing to gain a merit grade will have to meet all merit criteria.

For M1, learners are required to explain the importance of correct tool selection, transport, usage and maintenance. Evidence may be a verbal or written report, leaflet or presentation.

Assessment of M2 links to work completed for P5, P6, P7 and P8. To achieve M2 learners need to have demonstrated planning of the maintenance and repair tasks, and the work needs to have been completed to a high standard. This is expected to include the learner working independently, having a logical approach to completing the task, showing responsibility for the environment and checking their own work.

Assessment of M3 links to work completed for P9 and P10. To achieve M3 learners need to have demonstrated planning of the maintenance or repair tasks, and the work needs to have been completed to

a high standard, as for M2.

Assessment of M4 could be an extension of work completed for P11, P12, P13 and P14. Learners are required to explain the importance of planning estate maintenance work, particularly in overcoming the potential problems identified in the pass criteria. Evidence may be a verbal or written report, leaflet or presentation.

In addition to the merit criteria above learners wishing to gain a distinction grade will have to meet all distinction criteria.

For D1, learners are required to review the work they have completed for the pass and merit criteria, and suggest further maintenance work required. These suggestions should include maintenance of tools and equipment, boundaries and surfaces/habitats. Evidence may be a presentation, report, leaflet or guidance booklet.

For D2, learners are required to discuss how to plan and carry out two estate maintenance tasks to overcome problems and demonstrate responsible practices. The tasks chosen may be selected by the tutor or agreed through discussion with the learner. This assessment links to the pass and merit criteria, and the discussion should include, for example, how to plan to work within the legislation, minimise environmental damage, overcome problems and use appropriate tools safely and effectively. Evidence may be in the same format as D1.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P11, P12, P13, P14, M4, D2	Being Safe and Considering the Environment	You are working for a land-based business, and have been told a school pupil is planning to work alongside you for their work experience. Create a guidance leaflet for them which explains why planning estate maintenance work is important. Include the legislation that affects your work, how to overcome problems presented by services, how to dispose of waste and minimise environmental damage. Your leaflet should also show how to plan and carry out two tasks to overcome problems and demonstrate responsible practices.	Leaflet.
P1, P2, P3, P4, M1	Tools and Equipment	You are helping a busy countryside ranger with their work. You will be asked to select appropriate tools and equipment, lift them safely, transport and use them, and then maintain and store them. Create some notes for your work experience pupil explaining the importance of correct tool selection, transport usage and maintenance.	Observation records. Witness statements. Guidance notes.

Criteria covered	Assignment title	Scenario	Assessment method
P5, P6, P7, P8, M2	Boundary Maintenance	In your role you have been asked to plan and carry out routine repairs and maintenance of two boundaries. Before starting, assess the condition of the boundaries to plan the work needed. You will need to dispose of any waste in line with instructions.	Observation records. Photographic evidence.
P9, P10, M3, D1	Surface or Habitat Maintenance	Having completed the boundary tasks to a high standard you have now been asked to maintain or repair two surfaces or habitats. Before starting, assess the condition to determine the work needed. After completing these tasks, discuss the purpose of the work completed and suggest further maintenance required.	Observation records. Photographic evidence. Verbal report.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite. This unit has particular links with the following unit titles in the Environmental and Land-based suite:

Level 2	Level 3
Element CU19.1 Construct and maintain boundaries	Undertake Estate Skills
Element CU19.2 Construct and maintain paths	
Undertake Work Experience in the Land-based Industries	
Maintain Animal Accommodation	
Conservation and Improvement of British Habitats	
Understand the Principles and Practices of Animal Establishments	
Introduction to Caring for Horses	

Essential resources

Access to an area of land where practical work can be carried out is essential. Centres may need to provide transport for learners to travel to suitable sites. First aid facilities and appropriately trained staff are essential for such visits. Also required is a sufficient range and quantity of hand tools and materials to allow the tasks to be undertaken safely.

Ideally, tasks should be carried out 'for real' but, where this is not possible, temporary work is permissible. Powered machinery can be used where appropriate.

Employer engagement and vocational contexts

This unit focuses on the skills of estate maintenance and will provide learners with a basic knowledge of undertaking tasks on boundaries and surfaces or habitats. Learners will be encouraged to develop an understanding of health and safety while working and will consider environmental protection and ways of minimising damage in addition. Centres are encouraged to develop links with local businesses within the

sector being studied so learners can experience the day-to-day running of a busy estate via guest speakers and visits.

Indicative reading for learners

Textbooks

Agate E – *Fencing: A Practical Handbook* (BTCV, 2001) ISBN 9780946752294

Agate E – *Footpaths: A Practical Handbook* (BTCV, 2001) ISBN 9780946752317

Agate E – *Toolcare: A Maintenance and Workshop Manual* (BTCV, 2000) ISBN 9780946752249

Agate E – *Tree Planting and Aftercare: A Practical Handbook* (BTCV, 2001) ISBN 9780946752256

Agate E – *Woodlands: A Practical Handbook* (BTCV, 2002) ISBN 9780946752331

Brooks A and Agate E – *Hedging: A Practical Handbook* (BTCV, 1998) ISBN 9780946752171

Brooks A and Agate E – *Waterways and Wetlands: A Practical Handbook* (BTCV, 2001)

Brooks A, Adcock S and Agate E – *Dry Stone Walling: A Practical Handbook* (BTCV, 1999)
ISBN 9780946752195

Butterfield, W H – *Making Fences Walls and Hedges* (BiblioBazaar, 2009) ISBN 9781110871339

Health and Safety Executive leaflets eg *Manual Handling Assessment Charts* (HSE, 2003)
ISBN 9780946752300

Key R – *Garden Surfaces: 20 Projects for Paths, Decks, Steps Patios and Edgings* (Laurel Glen Publishing, 2003)
ISBN 9781571458247

Kindersley D – *Walls and Fences (RHS Practicals)* (Dorling Kindersley; 2nd Revised Edition, 2003)
ISBN 9780751348620

MacLean M – *New Hedges for the Countryside* (Farming Press Books and Videos, 1992)
ISBN 9780852362426

Negus J and Bradley V – *Garden Tools: An Illustrated Guide to Choosing, Using and Maintaining* (Carroll & Brown Publishers Limited; illustrated edition, 2001) ISBN 9781903258231

Scottish Executive Rural Affairs Department – *Prevention of Environmental Pollution from Agricultural Activity: Code of Good Practice Dos and Don'ts Guide* (Scottish Executive, 2002) ISBN 9780755905188

Stokes A – *Health and Safety Overview for Practical Conservation Project: A Guide to Good Practice for Conservation Groups and Land Managers* (BTCV, 1999)

Sutherland W J – *Managing Habitats for Conservation* (Cambridge University Press; 1st Edition, 1995)
ISBN 9780521447768

Websites

British Trust for Conservation Volunteers www.btcv.org.uk

Department for Environment, Food and Rural Affairs www.defra.gov.uk

Farm Wildlife and Advisory Group www.fwag.org.uk

Health and Safety Executive www.hse.gov.uk

Lantra Sector Skills Council www.lantra.co.uk

Natural England www.naturalengland.org.uk

Royal Horticultural Society www.rhs.org.uk

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	reporting how to overcome problems faced while working reporting on how environmental damage can be minimised describing how to overcome typical problems that may occur during estate maintenance activities describing appropriate situations for paths
Creative thinkers	Assessing the condition of boundaries, surfaces or habitats to determine maintenance requirement
Reflective learners	reviewing the purposes of different types of boundaries presenting current environmental and health and safety legislation and codes of practice
Team workers	taking responsibility for the environment carrying out maintenance tasks safely
Self-managers	selecting appropriate tools/equipment for specific estate maintenance tasks Lifting, transporting, maintaining and storing tools and equipment safely using appropriate techniques carrying out maintenance tasks safely
Effective participators	reporting how to overcome problems faced while working reporting on how environmental damage can be minimised describing how to overcome typical problems that may occur during estate maintenance activities.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	investigating key points of the current environmental and health and safety legislation and codes of practice
Creative thinkers	applying techniques to maintenance tasks
Reflective learners	evaluating own performance action planning and target setting for future activities
Team workers	peer help and support during tasks
Self-managers	risk assessment completion
Effective participators	investigating problems that occur when lifting incorrectly.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	presenting information on current environmental and health and safety codes of practice
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching the internet for current environmental and health and safety codes of practice
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	designing maintenance planning sheets presenting leaflets and pamphlets producing risk assessments for practical tasks
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	presenting information on current environmental and health and safety codes of practice
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	producing risk assessment for practical tasks
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	producing risk assessment for practical tasks
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	presenting information on current environmental and health and safety codes of practice
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching for current environmental and health and safety codes of practice
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	reporting how to overcome problems faced while working reporting on how environmental damage can be minimised describing how to overcome typical problems that may occur during estate maintenance activities describing appropriate situations for paths reviewing the purposes of different types of boundaries producing risk assessment for practical tasks.

Unit 9: Conservation and Improvement of British Habitats

Unit code: R/600/9380

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to introduce learners to skills and knowledge of habitat conservation and improvement and how these can be applied in practice. It is designed for learners in centre-based settings looking to progress into the sector or onto further/higher education. The learner will explore a range of British habitats, their characteristics, locations as well as methods used in habitat conservation, improvement and maintenance. They will learn the importance of habitat conservation through the monitoring and reporting of habitat conditions, their flora and fauna and how best to enhance and protect a local habitat. They will carry out practical habitat improvements to develop their skills in the field.

● Unit introduction

The British countryside contains a wide variety of habitats. For a small island country, the diversity of wildlife is large but the amount of space is limited. To maximise biodiversity, the small amount of natural space needs to be correctly managed. In order for learners to make a positive contribution to the future of rare and sensitive habitats, they need to develop an appreciation of the many different types of habitat found in the UK. Fundamental to this understanding is the ability to recognise habitats and gather information, analyse it and draw suitable conclusions.

This unit focuses on the identification and management of different habitats. It provides a forum for the discussion of the threats facing habitats and the management techniques for addressing them. In addition, it provides learners with the opportunity to actively manage and improve habitats to benefit wildlife.

On completion of this unit, learners will have a good knowledge of different habitats and the techniques available for managing them. Learners will also have developed the skills required to gather and interpret information from different habitats. By participating in this unit, learners will also learn how to identify tools and equipment used to carry out practical habitat management activities and a working knowledge of their safe uses.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know types of habitat found in the British Isles
- 2 Know factors that affect wildlife in the British Isles
- 3 Be able to collect and present information concerning flora and fauna
- 4 Be able to improve a habitat.

Unit content

1 Know types of habitat found in the British Isles

Major habitat types: upland; lowland (grassland, heathland, wet); freshwater; coastal; woodland

Local habitat types: specific habitats eg marsh, ponds, lakes, peatlands, reservoirs, rivers, wetlands, grassland, heathlands, meadow, mountain, woodlands, scrub, field margins, hedgerows, urban, estuarine, mud-flats, sand dunes, maritime cliffs; buffer zones; habitat origins and development; human influence; effects of weather and climate

Characteristics: altitude; rainfall; temperature (maximum and minimum); light levels; wind speed and direction; hours of sunlight; soil characteristics (soil type, water holding capacity, aeration, stability, organic matter, pH, soil structure); nutrient status; dominant flora and fauna

Mapping: habitat types in a specified area eg Phase 1 Habitat Map

2 Know factors that affect wildlife in the British Isles

Biotic factors: presence or absence of other plants and animals, competition, food chain

Abiotic factors: soil (type, characteristics, pH, nutrients); temperature; rainfall; wind; light; humidity; aspect; shelter; water presence and characteristics eg static, flowing, salt content, clarity, dissolved oxygen, pollutants

Relationships: predation; parasitism; symbiosis; competition

Population: factors eg food supply, space, birth and death rates, migration, disease

Human: influences eg agriculture, forestry, building or road developments, tourism, industrial, shipping, leisure and recreation, conservation and habitat improvement activities

3 Be able to collect and present information concerning flora and fauna

Survey: quadrats/line transects; species identification (using keys, guides); collation of results; importance of surveys in monitoring eg habitat decline, pollution, species under threat

Flora: relevant to site studied eg trees, wildflowers, grasses, planted crops

Fauna: relevant to site studied eg mammals, birds, reptiles amphibians, fish, invertebrates

Data presentation: quantitative and qualitative; written; graphical; pictorial; how results may be used; record keeping requirements for habitat conservation schemes

4 Be able to improve a habitat

Need for improvement: causes eg neglect, overgrown, polluted, updated rationales to management plans; reasons eg benefit to wildlife, benefit to human community, need to have varying habitat types close to one another, site management planning

Equipment: as appropriate to task eg spades, forks, shovels, secateurs, handsaws, clippers, hammers, pickaxes, hand fencing equipment; safe and correct use; checks prior to use; suitable clothing and personal protective equipment (PPE)

Habitat improvement work: health and safety; tool selection, use and maintenance; practical jobs relevant to the area of study with the intention of improving habitats eg mowing, renovation, planting and staking as applicable, clearing (path, fence line), coppicing, uprooting, weeding, hedge maintenance, pruning, thinning, cutting or mowing and mulching, pond, stream and ditch clearance

Minimising environmental damage: minimising damage during task eg noise, pollution, habitat disturbance, species disturbance; minimising damage after task, waste disposal, use of composting, re-use or recycling of materials

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 identify major British habitat types	M1 discuss the origins and development of a given habitat type	D1 explain human influences on wildlife for a given habitat
P2 describe major British habitat types		
P3 outline characteristics of a given habitat		
P4 describe biotic and abiotic factors that affect a given species of wildlife within a specified habitat	M2 discuss the population factors that affect a given species of wildlife in a specified habitat	
P5 outline relationships between species within a specified habitat		
P6 select and use survey techniques in accordance with survey specification	M3 interpret and summarise data collected	D2 recommend improvements to a specified habitat based on survey information.
P7 conduct a survey of a specified local habitat, recording flora and fauna [IE,TW,SM]		
P8 present data collected [IE]		
P9 select and use appropriate equipment [SM]	M4 explain the need to improve wildlife habitats.	
P10 carry out habitat improvements safely according to site management plans [TW]		
P11 carry out work in a manner which minimises environmental damage. [TW]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

This unit can be delivered through a range of activities. In addition to lectures, seminars and practical sessions, visits to habitats can greatly enhance the learners' development of understanding of a range of habitats, their flora and fauna. Talks from habitat specialists who are involved in the management of habitats will help learners develop an awareness of current issues.

Field-based activities are an important part of this unit. In particular, some learning outcomes require learners to carry out practical habitat surveys and habitat improvements. Where possible, delivery should reflect learners' interests while seeking to broaden understanding of different habitat types.

Much of the unit content can be delivered at the centre. Even urban-based centres have scope for habitat survey and practical work, although field trips may be required to cover the breadth of the unit content.

Work placements may support delivery of this unit, and should be monitored regularly to ensure the quality of the learning experience. Learners and supervisors should be 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 improve several habitats when they are on their work placement. Learners should be encouraged to ask for observations records and/or witness statements to be provided as evidence.

Tutors could integrate the delivery, private study and assessment relating to this unit with any other relevant units and assessment instruments in the learner's programme of study. For example, some of the practical elements of this unit are related to the unit covering estate skills.

Health and safety issues relating to fieldwork must be stressed and regularly reinforced, with appropriate risk assessments undertaken prior to any practical activities. Learners will need access to a well equipped store of tools and personal protective equipment.

For learning outcome 1, learners should know the types of habitats and how to map a local habitat. Delivery is likely to be in the form of lectures and discussion in the first instance, and practical field investigations that will link easily to the delivery of all the other learning outcomes. Learners should visit at least two different habitats, which might include those encountered through a work experience placement. For habitats that are not easily accessible, the use of high quality visual/audio-visual materials and internet access would provide an alternative means of research. Study could be made, for example, of which plants grow in particular soil conditions, and where habitats (local and major) are to be found on maps of the United Kingdom.

For learning outcome 2, learners will begin to understand the dynamic relationships between wildlife and its habitat. Delivery is likely to be in the form of lectures, discussion and practical fieldwork activities. Although general concepts (eg birth and death rates, tourism) might be applied through a national perspective, detailed investigations could take place during fieldwork in a specified area. This is likely to be an area local to the centre but can be further a field. For human factors learners should attempt to include a new scheme or development eg a road, housing estate or new factory.

For learning outcome 3, learners need to demonstrate habitat survey techniques. This is likely to be delivered through lectures, discussions and fieldwork activities. A minimum of one day should be spent conducting investigative surveys. Flora and fauna would be those that are commonly found in or around the site used for the survey. Learners should be discouraged from any activity that may cause excessive disturbance or harm to the site studied, its flora or fauna. When surveying plant life, leaf shapes are helpful when counting the number of species within any one layer, and flowers are useful in identifying grass/wildflower species.

Learning outcome 4 is likely to be largely practical in its delivery and assessment. Lectures and seminar groups could be used to identify the needs for habitat improvement and maintenance and appropriate (supervised) improvement activities that could be undertaken by learners. An important concept includes the proximity of habitats and their interdependence. Processes could include the recycling of garden waste. Learners could, for example, construct a compost heap ensuring aeration, contact with the soil and protection from torrential rain.

Practical work involving the restoration/improvement of a habitat could be a group project. Tools and their uses should be identified and health and safety enforced at all times. Risk assessments should be done prior to any field-based activities.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Assignment 1: The Large Blue Butterfly (P1, P2, P3, P4, P5, M1, M2, D1)
Tutor introduces the assignment brief.
Classroom activity: description of major habitat types.
Visits to see different habitat types.
Class discussion: features of different British habitats.
Discussion of abiotic features.
Theory session: review of biotic features including population interactions.
Learner research and assessment completion.
Assignment 2: Habitat Survey (P6, P7, P8, M3)
Tutor introduces the assignment brief.
Classroom activity: carrying out surveys, survey types and methods, species identification.
Practical activities and assessments: carrying out surveys of local habitats.
Reporting results: calculating and presenting results.
Survey write-up and assessment completion.
Assignment 3: Habitat Management (P9, P10, P11, M4, D2)
Tutor introduces the assignment brief.
Completing risk assessments, planning tool use and tasks.
Classroom activity: improving wildlife habitats, reasons and methods.
Practical activities and assessments: carrying out practical habitat management.
Review of work completed and impact on wildlife improvements.
Learner research and assessment completion.

Assessment

For P1 and P2, learners need to identify (P1) and describe (P2) major British habitat types. Learners could demonstrate their knowledge through short answer questions or by producing an annotated map, leaflet or report.

For P3, learners are required to outline the characteristics of a given habitat. Characteristics included should be those shown in the unit content. Evidence for this could be in the same form as P1.

For P4, learners are required to describe biotic and abiotic factors that affect a given wildlife species within a specified habitat. The habitat could be specified by the tutor, or agreed through discussion with the learner. Evidence could be a poster, leaflet or report, including examples of how wild animals and plants thrive or are restricted in a specified habitat.

P5 requires learners to outline the relationships between species in a specified habitat. This could be based upon the same site as for P4. Suitable evidence would be a leaflet or annotated poster.

For P6 and P7, learners are required to select and use a survey method (P6) and carry out a survey (P7) on a specified habitat. Suitable evidence for this would be an observation record or a witness statement.

P8 requires learners to present the results of their survey. This could be in the form of completed worksheets.

For P9, P10 and P11, learners will be assessed on their practical improvements to a habitat. Learners must select and use appropriate equipment (P9), safely carry out practical habitat improvements (P10) and carry out the work in a manner that minimises environmental damage (P11). Learners will need to carry out at least three habitat management tasks. Habitat improvements may be undertaken as group activities, but the evidence to meet the criteria must be present for each learner individually. The use of video or photographic evidence of achievement must be authenticated. If practical activities are assessed directly by the tutor, suitable evidence would be observation records completed by the learner and the tutor. If assessed during an industry experience placement, witness statements should be completed by a suitable industry representative and verified by the tutor. Health and safety is paramount, and appropriate risk assessments must be done prior to any practical activities.

For M1, learners are required to discuss the origins development of a given habitat type. This could be an extension of work completed for P3 and evidence could be in the same format.

For M2, learners must discuss the population factors that affect a given species of wildlife in a specified habitat. This could be assessed through an assignment that links to P4. Suitable evidence includes observation records, witness statements, a pictorial presentation with notes (possibly using appropriate software or OHPs), an annotated poster or a leaflet.

For M3, learners must interpret and summarise survey information relating to a specified habitat. Learners could do a project based on the results taken from their survey for P7. Alternatively, assessors may provide survey results for another site, which will give learners the opportunity for detailed interpretation. Suitable evidence would be a written report, an annotated poster or pictorial presentation using appropriate software.

For M4, learners must explain the reasons why habitat improvements are undertaken. This could be the same work carried out for P10 and P11. Evidence for this criterion could be given through a presentation, an observation record, witness statement, or in any suitable written format.

For D1, learners must explain human influences on wildlife in a specified habitat. Learners could use evidence collected via news items or reports from organisations objecting to or supporting, for example, a proposed building development or proposed environmental scheme. Alternatively, evidence could be produced in a seminar discussion about the positive and negative human influences.

D2 requires learners to recommend habitat improvements for a specific site based on survey information.

This could be the same site as the one worked on for P7 or P10 or a different site, and may be identified by the tutor or in discussion between learner and tutor. Evidence may be based on the use of scenario-based materials, which detail a local organisation that wants improvements made to a site. Learners could present their plans as a written or verbal presentation (with appropriate records).

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, P3, P4, P5, M1, M2, D1	The Large Blue Butterfly	You are working for the National Trust and you have been asked to create an innovative description on the successful re-introduction of the Large Blue butterfly (<i>Maculinea arion</i>) to the UK. Ensure you include a description of the major UK habitats, as well as the habitat, population and human factors which have contributed to this re-introduction.	Annotated poster. Press release. Written report. Completed worksheets.
P6, P7, P8, M3	Habitat Survey	The local wildlife trust has been donated a piece of land and has asked you to carry out a basic survey of the principal features. They have also asked you to present an interpretation and summary of your results, and to recommend habitat improvements.	Completed worksheets. Annotated poster.
P9, P10, P11, M4, D2	Habitat Management	As a member of the British Trust for Conservation Volunteers, you have been asked to participate in some practical habitat improvement tasks. On one of the tasks, a member of the public has walked up to you and asked why you are carrying out the work.	Practical observation records. Witness statements.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2
Element EC2.1 Collect and record data on the natural environment
Element EC2.2 Report on the condition of the natural environment
Element CU87.1 Maintain suitable site conditions
Element CU87.2 Manage vegetation
Unit 7 Understand the Basic Principles of Animal Biology
Unit 8 Participate in Providing Estate Maintenance

Essential resources

Learners should have access to a wide range of different habitats. If these cannot be provided on the centre's site, then transport should be provided to give learners access to a suitable mix of sites. Ideally, a site manager or countryside warden should provide a guided tour of the site and explain the management work and rationale for the management. Suitable sites will also be required for learners to carry out practical tasks. In addition, a well-stocked tool store will be required to enable learners to carry out practical habitat management activities. Suitable personal protective equipment and first aid kits will also need to be provided.

Employer engagement and vocational contexts

For this unit it is desirable that links be made with local authority countryside services; country estates, the local wildlife trust or Natural England. Some parts of the unit can be delivered within a vocational setting by using the learner's work placement.

Indicative reading for learners

Textbooks

Ausden M – *Habitat Management for Conservation – A Handbook of Techniques* (Oxford University Press, 2007) ISBN 9780198568735

Bibby C J – *The Conservation Project Manual* (BP, 2003) ISBN 9781901930399

BTCV – *Health and Safety Overview for Practical Conservation Projects* (British Trust for Conservation Volunteers, 2006) ISBN 9780950164380

Jefferies M J – *Biodiversity and Conservation* (Routledge, 2006) ISBN 9780415343008

Lenon B and Cleves P – *Fieldwork Techniques and Projects in Geography* (Collins Educational, 2001) ISBN 9780007114429

Nature Conservancy Council – *Handbook for Phase One Habitat Survey: A Technique for Environmental Audit* (Joint Nature Conservation Committee, 1990) ISBN 9780861396368

Rose F and O'Reilly C – *The Wild Flower Key (Revised Edition): How to identify wild plants, trees and shrubs in Britain and Ireland* (Frederick Warne, 2006) ISBN 9780723251750

Smith R L and Smith T M – *Ecology and Field Biology* (Benjamin Cummings, 2001) ISBN 9780321042903

Townsend C R, Begin M and Harper J L – *Essentials of Ecology* (Blackwell, 2008) ISBN 9781405156585

Warren A and French J R – *Habitat Conservation – Managing the Physical Environment* (John Wiley and Sons, 2001) ISBN 9780471984993

Journal

British Wildlife

Websites

Department for Environment, Food & Rural Affairs	www.defra.gov.uk
Environment Agency	www.environment-agency.gov.uk
Farming and Wildlife Advisory Group	www.fwag.org.uk
Forestry Commission	www.forestry.gov.uk
Joint Nature Conservation Committee	www.jncc.gov.uk
Lantra	www.lantra.org.uk
Linking Environment and Farming	www.leafuk.com
Natural England	www.naturalengland.org.uk

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	carrying out a survey of a local habitat
Team workers	working together to carry out a survey reaching a group decision on the best method to choose to conduct a particular survey working together on a practical task
Self-managers	selecting tools to use for a task and caring for resources.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Creative thinkers	developing solutions to situations encountered during a practical habitat management task
Reflective learners	justifying the benefits of carrying out practical habitat management tasks
Effective participators	carrying out a survey of a local habitat.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using software to analyse and present data
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching information on the successful re-introduction of the Large Blue Butterfly
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	summarising and analysing information obtained during surveys of local habitats
Present information in ways that are fit for purpose and audience	providing an oral presentation or writing a written report on the information obtained from the survey of a specified habitat
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	analysing and interpreting information obtained during the survey of a local habitat
Draw conclusions and provide mathematical justifications	providing conclusions of a habitat based upon their survey and numerical analysis
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing methods for carrying out a survey
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching the complex array of sources behind then factors involved with the successful re-introduction of the Large Blue Butterfly
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	providing justification for the need to manage wildlife habitats.

Unit 10: Presentation and Service for Retailing in the Land-based Sector

Unit code: A/600/9356

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit has been specifically developed for 14-19 year old learners in full-time education acquiring additional knowledge of retailing.

● Unit introduction

Working within a land-based retail environment will be varied and challenging especially at busy times of the year. Ever changing products and responding to seasonal demand and the needs of customers are essential to the success of retail businesses.

This unit covers the planning and layouts used within retail outlets, products and services available and the preparation and display of products for sale. It also looks at the key areas of customer service and care. It is therefore essential that this unit is delivered in the context of the land-based sector being studied.

Throughout this unit learners will be made aware of the health and safety implications of the work they are carrying out and legislation relating to the subject. Learners will develop skills in a range of customer care activities including processing payments and investigating customer satisfaction.

On completion of this unit, learners will have a basic understanding of working within a retail environment and demonstrate skills that relate to their own area of study. The unit will also prepare learners for a range of vocational jobs within the retail sector and will provide a sound foundation for further study at a higher level.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to design a suitable layout for a land-based retail outlet
- 2 Understand the products and services provided by a land-based retail outlet
- 3 Be able to prepare and display products for sale
- 4 Be able to demonstrate appropriate customer care skills.

Unit content

1 Be able to design a suitable layout for a land-based retail outlet

Retail outlets: eg superstore, shop, stall, discount store, in-store franchise

Planning layout: space available, ease of movement, display areas, product positioning, styles of layout and evaluation

Health and safety: considerations eg access, egress, fire and accident procedures, first aid facilities, risk assessment, waste disposal

Current legislation: Sale of Goods Act 1979, Trade Descriptions Act 1968, The Supply of Goods and Services Act 1982, Sunday Trading Act 1994, Health and Safety at Work Act 1974; Pet Animals Act 1951

2 Understand the products and services provided by a land-based retail outlet

Land-based retail outlets: eg garden centre, nursery, florist, pet shop, tack shop, feed supplier, DIY store, machinery outlet, farm shop

Products and services: types of products, types of services available, seasonal and non-seasonal products; factors affecting choice eg cost, profit margin, lifespan and care of perishable and non-perishable products, marketing, availability, personal preference, delivery

3 Be able to prepare and display products for sale

Prepare products for sale: preparation of perishable and non-perishable products eg adding packaging, wrapping or trims to improve appearance and shelf life, removing damaged products; clear labelling eg price in line with relevant current legislation, attracting customers eg sales, loyalty products, marketing

Display products for sale: types of display eg themed, point of sale, window, racks, shelves; principles of display eg colour, texture, shape; health and safety eg tidiness, shelf life

Maintenance of products: stock control, stock rotation, shelf life, tidiness of displays, presentation, disposal of spoilt products and those that have reached their sell-by date

4 Be able to demonstrate appropriate customer care skills

Processing payments: procedures for payment by cash, cheques, debit and credit cards including chip and pin payments, correct procedures for handling payments, completing documentation eg purchases made on business accounts, basic checks for fraudulent payments with cash, cards, cheques, using a cash register; security

Dealing with customers: how to greet customers both on the telephone and in person, presentation of self, interpreting body language, own use of body language, bringing out the selling points, offering assistance and advice, creating and closing a sale, dealing with difficult customers and situations

Customer satisfaction: quality and availability of products and services, quality of customer care skills, value for money, methods of identifying customer satisfaction eg questionnaire, analysis of complaints

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 plan the layout for a land-based retail outlet [IE, SM]	M1 complete risk assessments for a given land-based retail outlet	
P2 report on the health and safety and legislative requirements of a retail outlet [SM]		
P3 justify the layout of a land-based retail outlet		
P4 review products and/or services in a given land-based retail outlet [IE]	M2 suggest ways to add value to perishable and non perishable products	
P5 evaluate factors influencing choice of products and services for a given land-based retail outlet [IE, RL]		
P6 describe the stocking requirements of products being sold in given land-based retail outlet		
P7 prepare products for sale [TW, SM]	M3 complete maintenance checks for given land-based retail outlet	D1 explain how given displays attract customers
P8 display products for sale [TW, SM]		
P9 maintain displays within a given land-based retail outlet [TW, SM]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P10 perform customer care related activities <ul style="list-style-type: none"> • processing payments • dealing with customers • customer satisfaction [TW,SM]	M4 demonstrate appropriate customer service skills to meet given objectives.	D2 produce easy-to-follow guidelines on customer care.
P11 describe the importance of customer care in land-based retail outlets. [CT]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Tutors delivering this unit have opportunities to use an extensive range of teaching techniques including, lectures, discussions, simulation, role playing, case studies, site visits and practical activities, research using the internet and/or library resources and the use of personal and/or industrial experience. Delivery of this unit should stimulate, motivate and educate the learner.

Health and safety issues relating to work must be stressed and regularly reinforced, and risk assessments must be undertaken prior to practical activities. Learners should be taught safe working practices by demonstration and supervised practical work. Thereafter they should be given sufficient time and guidance to develop practical skills. The underpinning principles of customer care explored in this unit should be related to practical work undertaken and referred to during practical work in order to help learners make a strong connection between theory and practice.

The first part of the unit will cover the design and layouts used in land-based retail outlets. Planned visits to a variety of these within the land-based sector being studied will be useful. They aid learning and should include activities that encourage learners to explore the scope and significance of work in different types of retail outlet. Centres may use their own retail facilities if they are appropriate to the sector being studied. Visiting expert speakers, for example a manager from those listed in the content, garden centre, nursery, florist, pet shop, tack shop, feed supplier, DIY store, machinery outlet or farm shop, could talk about their work and the designs they use. Emphasis should be placed on the health and safety and environmental aspects of the design, in order to increase learner awareness of their responsibilities.

Through a range of formal lectures, discussions, supervised practicals and simulations, learners will develop their knowledge of the main products and services within the industrial sector. It is expected that learners look at the factors that affect customer product choice and the product advice that is given to customers by retail staff or from the product itself. Off-site visits to retail outlets, especially during seasonal times, could form part of the delivery. Visiting expert speakers could add insight into the subject and embed further skills and knowledge.

When preparing and displaying products, techniques should be varied, combining theory and practical sessions. Formal lectures, discussions, simulations and role playing, practicals and presentations by learners could form part of the delivery. Theory should be linked to the practical situation found in appropriate retail outlets. Relevant visits or visiting speakers could give practical insights and knowledge of the subject to the learners.

Customer care skills can be formed via formal lectures, demonstrations, simulations, case studies, role play and supervised practicals. Learners will also be able to develop knowledge and skills through work placement or by working in a centre's own retail facilities (if appropriate). It is expected that learners will develop knowledge of appropriate responses to customers within a range of situations. Visiting a customer service department at a range of outlets will allow expert speakers to talk about the importance of their work.

Learners may have the opportunity to contribute to parts of this unit and its criteria while on work placements. They should be encouraged to ask for observation records and/or witness statements to be provided as evidence. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Tutors should integrate the delivery, private study and assessment relating to this unit with any other relevant units and assessment instruments in the learner's programme of study.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Assignment 1: Retail Outlet Design (P1, P2, P3, M1)
Tutor introduces assignment brief.
Theory-based sessions: safety at work, developing underpinning knowledge of the risks and hazards within retail outlets.
Theory-based sessions: land-based retail outlets, design, products and services.
Off-site visits.
Personal Study.
Assignment 2: Prepare and Display Products for Sale (P4, P5, P6, P7, P8, P9, M2, M3, D1)
Tutor introduces assignment brief.
Theory-based sessions: preparation and display.
Practical demonstrations, observations and assessments on preparation and display.
Work-based activities.
Personal study.
Assignment 3: Customer Care (P10, P11, M4, D2)
Tutor introduces assignment brief.
Theory-based sessions: customer care activities.
Practical demonstrations, observations and assessments on customer care activities.
Personal study.
Tutorial 1:1 help and guidance.

Assessment

All assessment and grading criteria are based on retailing for land-based outlets. Where possible these should be related to a real outlet with links to the centre; however centres are able to make use of good quality case study materials for those tasks that cannot be undertaken within a real retail context.

Learners will need to meet all pass criteria to successfully complete this unit.

For P1, learners have to plan a layout for a land-based retail outlet. Tutors may either choose the retail outlet or agree it with the learner. It must, however, be linked to the land-based sector being studied.

P2 looks at the health and safety and legislative requirements of a retail outlet. Learners should investigate laws relating to themselves, customers and the general public, other employees and the employer in the context of a selected outlet. It is expected that the evidence to this criterion should be linked to the retail outlet in P1.

P3 requires learners to review the main products and services that are available in a given land-based retail

outlet. This could again be the same retail outlet as that used in P1.

Evidence for P1, P2 and P3 could take the form of a retail planning project including an annotated poster showing plans.

P4 requires learners to review the products and/or services of a given land-based outlet in terms of what's available, when it's available and how they are presented. Evidence could be in the form of a report. P5 and P6 requires a simple evaluation of the factors that influence choice of products and services and description of stocking requirements for a given outlet. Evidence for this could be linked to P4 and follows neatly the review of products undertaken. Where possible, the size and complexity of the tasks should be the same for each learner to ensure fairness of assessment.

P7 and P8 require learners to prepare and display products for sale. Where possible, the number and quantity of products in each category should be the same for each learner to ensure the fairness of assessment. Simulation exercises could be used to obtain evidence for these criteria. However, it could be assessed directly by the tutor during practical activities within a retail outlet. If this format is used, suitable evidence from guided activities would be observation records completed by the learner and tutor. If assessed during a work placement, witness statements should be provided by a suitable representative and verified by the tutor. Guidance on the use of observation records and witness statements is provided on the Edexcel website. In addition risk assessments should be completed for all practical tasks.

For P9 learners are required to maintain displays and these could be linked to P7 and P8 and assessed in the same format as these.

P10 requires learners to perform the customer care and service related activities. It must be linked to the land-based sector being studied by the learner. Where possible the payments and customers should be the same for each learner to ensure fairness of assessment. Tutors may use difficult customers or scenarios during the assessment process, but they should be the same and fair to all learners. Evidence for this criterion may be gathered in a manner similar to that described for P7 and P8.

P11 requires learners to describe the importance of customer care in land-based retail outlets; this could be achieved using a report style or a leaflet aimed at a new employee for instance.

In addition to the pass criteria above, learners wishing to gain a merit grade will have to complete all merit tasks.

M1 requires learners to complete risk assessments for the given land-based retail outlet linking with the P2 criteria.

For M2, simulation exercises could be used to obtain evidence for this criterion and may be linked directly to the retail outlet used in providing evidence for other criteria. It must, however, be linked to the land-based industrial sector being studied by the learner. Where possible the products should be the same for each learner to ensure fairness of assessment. Evidence for this could be in short answer structure questions or through observations completed by tutor/employer and learner.

M3 will require learners to complete a maintenance checklist; this should be related to the retail outlet identified in P1 and could take the form of a table included in the project

For M4, simulation exercises could be used to obtain evidence and this may be linked directly to the retail outlet used in providing evidence for other criteria. Objectives should cover correct processing of payments and good customer service including greeting, own presentation, use of body language, assisting with sales and difficult customers. Evidence is likely to be through observations completed by tutor/employer.

In addition to the merit criteria above, learners wishing to gain a distinction grade will have to complete all distinction tasks.

D1 requires learners to give valid explanations of how displays attract customers covering key points. Evidence could be in the form of an advertising poster or flyer highlighting the key points.

For D2, learners need to develop some easy-to-follow guidelines on ensuring customer satisfaction and dealing with complaints. This could be in the form of an annotated poster or new employee guide to customer care.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
PI, P2, P3, M1	Retail Outlet Design	The layout and products of retail outlets will not only attract the customer but keep them coming back. In this assignment you will acquire the knowledge to plan a layout and review products of a retail outlet suitable for your own area of study. You will also give consideration to the health and safety and legislation involved.	Retail planning project. Risk assessments. Annotated poster showing plans.
P4, P5, P6, P7, P8, P9, M2, M3, D1	Prepare and Display Products for Sale	A practically based assignment in which you will be required to prepare and display actual products for sale as well as add value. Maintenance checks, correct disposal of waste and evaluation skills will also be gained.	Observation records. Witness statements. Risk assessments.
PI0, PI1, M4, D2	Customer Care	Customers are the reason you have a retail outlet. In this assignment you will perform customer care related activities including processing payments, demonstrating good customer service and describing ways of attracting the customer.	Observations records. Witness statements. Leaflet. Flyer. Employee guide and questionnaire.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite. This unit has particular links with the following unit titles in the Environmental and Land-based suite:

Level 2	Level 3
Undertake Work Experience in the Land-based Industries	Undertake Retail Merchandising for the Land-based Sector
Maintain Animal Accommodation	
Undertake Practical Animal Feeding	
Maintain Animal Health and Welfare	
Environmental and Land-based Business	
Understand the Basic Principles of Animal Biology	
Participate in Providing Estate Maintenance	
Conservation and Improvement of British Habitats	
Presentation and Service for Retailing in the Land-based Sector	
Introduction to Animal Breeds and Grooming	
Understand the Principles and Practices of Animal Establishments	
Contribute to the Care of Exotic Animals	
Unit 14 Contribute to the Nursing of Animals	
Introduction to Caring for Ornamental Aquatics	

Essential resources

Access to a retail environment with a range of equipment and products is essential for the delivery of this unit and must relate to the learner's own area of study. Ideally this would be a commercial environment, but centres may use a simulated environment if necessary.

Internet access and support should also be available.

Employer engagement and vocational contexts

This unit focuses on retail design and customer care. Learners will be encouraged to develop an understanding of the risks and hazards while working in their chosen sector, including health and safety of themselves, other employees, employers and their customers. Centres are encouraged to develop links with local businesses within the land-based retail sector, so that learners can experience what it would be like to work within this area. This could be via off-site visits or guest speakers.

Indicative reading for learners

Textbooks

Barrow C – *The Essence of Small Business* (FT Prentice Hall, 1998) ISBN 9780137486410

Cox R and Brittain P – *Retailing: An Introduction* (FT Prentice Hall, 2004) ISBN 9780273678199

Hammond R – *Smart Retail: Turn Your Store into a Sales Phenomenon, 2nd Edition* (Prentice Hall; 2007)
ISBN 9780273712770

Johns T – *Perfect Customer Care, 2nd New Edition of Revised Edition* (Random House Business Books, 2003)
ISBN 9781844131532

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	planning the layout for a retail outlet exploring from different perspectives reviewing products and/or services evaluating factors influencing choice of products and services
Creative thinkers	describing the importance of customer care
Reflective learners	evaluating factors influencing choice of products and services
Team workers	preparing products for sale displaying products for sale maintaining displays performing customer care activities
Self-managers	reporting on the health and safety and legislative requirements completing risk assessments preparing products for sale displaying products for sale maintaining displays.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	justifying the layout of retail outlets describing ways to attract customers
Creative thinkers	completing maintenance checklists describing ways to attract customers
Reflective learners	suggesting ways to add value to products making recommendations for change with design
Self-managers	completing risk assessments suggesting ways to add value to products
Effective participants	making recommendations for change with design.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	presenting information on planning a layout for a land-based retail outlet
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching the internet for health and safety and legislative requirements of a retail outlet
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	designing tables for maintenance plans presenting leaflets, flyers, posters producing risk assessments producing easy-to-follow guidelines on customer satisfaction and dealing with complaints
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	presenting projects on planning retail outlets
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	producing risk assessment for practical tasks
Use appropriate checking procedures and evaluate their effectiveness at each stage	measuring retail outlet sizes before planning their design
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	producing a risk assessment for practical tasks measuring retail outlet sizes before planning their design
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	presenting information on planning a layout for land-based retail outlet demonstrating good customer service
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reviewing products being sold in land-based retail outlets
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	reporting on the health and safety and legislative requirements of a retail outlet describing the stocking requirements of products being sold in given land-based retail outlet describing the importance of customer care in land-based retail outlets.



Unit 11: Introduction to Animal Breeds and Grooming

Unit code: D/600/9351

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles animal breeds and grooming and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Breeding and domesticating animals is an integral aspect of food and by-produce production, providing us with working animals, companions, entertainment, sport and animals used in research. From developing and manipulating breeds, humans have been able to carry out major changes in society's use of and consideration for animals.

By understanding breeding as a science, learners will gain an understanding of the principles of domestication and relative theories, including Darwin's theory on natural selection and evolution. This subject will be contextualised and learners encouraged to identify examples.

The pet industry has come about due to society's demands, and over many years has provided us with a way to uniquely interact with certain species and breeds. In breeding animals suitable for the pet industry, care and attention of these animals has become an industry in its own right. Grooming, bathing and maintenance of animals are all part of daily husbandry routines and legislation has been passed to enforce key aspects of this care.

Learners will learn the specific grooming maintenance for different breeds of small animals. The unit will help to develop their understanding of how species-specific needs and breed varieties will alter grooming, care and upkeep. Learners will be able to describe and recognise the differences between genetic and phenotypic traits, breed societies and their influence on standards and ideal conformities.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the history of animal development, domestication and breed development
- 2 Know the breeds of small animal species kept as pets and their associated breed societies
- 3 Know the reasons and requirements for grooming animals
- 4 Be able to groom small pet animals.

Unit content

1 Know the history of animal development, domestication and breed development

Principles of natural selection and survival of the fittest: adaptations over time; mutation; phenotype characteristics; genetic heritable traits; sexual selection; Darwin's theory; extinction; ecological niches

The history of animal domestication: artificial selection; traits selected for purpose eg companionship, working characteristics, breed improvements; timeline of domestication, Jared Diamond theory, former and modern instances

Human influence on breed development: inbreeding; new species, genetic pollution, hybridisation, productive advantages, eradication of disease, conservation

2 Know the breeds of small animal species kept as pets and their associated breed societies

Common breeds: dog eg German Shepherd, border collie, English mastiff, dachshund, beagle, springer spaniel, golden retriever, Labrador, Scottish terrier, highland terrier, cocker spaniel, basset hound, English bull terrier, Staffordshire bull terrier, Yorkshire terrier

Breed societies: Kennel Club groups, breed standards, breed recognition

Breeds recognised by the governing council of the Cat Fancy: Persian section, semi-long-hair section, British section, foreign section, Burmese section, oriental section, Siamese section

Main breeds of small animals: rabbits eg Dutch, Netherland, English, dwarf lop, rex, Flemish giant; guinea pigs eg self varieties, patterned varieties, long haired and rex coats; hamsters eg Syrian, Russian, Chinese; rats eg double rex, dumbo, hairless, odd eyed, rex, satin, standard, tailless

Characteristics: (rabbits, guinea pigs, hamsters, rats, mice) colour pigmentation; markings; coat type; weight; size; behaviour

3 Know the reasons and requirements for grooming animals

Grooming requirements: breed requirements and standards; coat condition; history; owner's requirements; animal's temperament; problems eg animal health situations, matted coat, animal's behaviour, owner's temperament and requirements

Reasons for grooming: (rabbits, guinea pigs, hamsters, rats, mice) aesthetic, health, hygiene, cleanliness, bonding, showing

4 Be able to groom small pet animals

Preparation: assessment of animal, clean area, appropriately select and maintain equipment eg scissors, brushes, combs, rakes, dematting equipment; train the hair/fur; wash and shampoo the fur/hair, (breed specific); coat preparation eg dematting, combing, brushing

Grooming: (dogs, cats, rabbits, guinea pigs, hamsters, rats, mice) use grooming equipment eg wrappers, paper strips, shedding blades, blocks, scissors, brushes, combs, (curry/stripping) rakes, dematting equipment; nail trimming; anal glands; fluff drying

Health and safety: cleaning of area before and after grooming; personal protective equipment; washing hands; washing animal; identification of common skin and coat conditions; appropriate management for animals of different temperaments; disposal of waste; ability to follow safe protocols; minimisation of zoonosis; adherence to relevant codes of practice and legislation eg Animal Welfare Act 2007, Health and Safety at Work Act 1974

Restraint and welfare: correct handling, use of muzzles and other restraining equipment appropriate to species, identification of stress, management of stress

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 state the main principles of natural selection and survival of the fittest [IE]	M1 describe the relationship of extinction to natural selection	D1 explain the relationship of extinction to natural selection using valid examples
P2 outline the history of animal domestication by humans [IE]		
P3 describe the human influence on breed development [IE]	M2 outline the principles of mutation and its impact on breed development	D2 describe hybridisation benefits for the eradication of disease
P4 identify common breeds of dog, cat and small mammal	M3 explain the importance of selected breed societies	
P5 describe characteristics of commonly found breeds of small animals kept as pets		
P6 outline the importance and role of animal breed societies		
P7 describe reasons for grooming animals	M4 explain reasons for preparation when grooming	D3 compare different grooming techniques against different animal temperaments.
P8 outline the grooming requirements of commonly found breeds of small animals kept as pets		
P9 prepare animals for grooming	M5 confidently carry out different grooming techniques according to species or breed.	
P10 groom a dog, cat and one other small pet animal to meet given objectives.		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Learners will develop an understanding of the domestication of animals over time and how human interactions have shaped the breeds of animals we see today. The unit will enable learners to understand the theories that are recognised as leading the way forwards in breed development as a science. Learners will investigate how humans have influenced and impacted on the evolution of animals with both positive and detrimental effects. The unit will incorporate the role breed societies play in shaping pet breeds. Delivery for these topics can be via lectures, presentations, demonstrations, research, visits and guest speakers from the industry.

In learning outcome 1, learners will be assessed on their ability to interpret and identify examples of natural and sexual selection and explain their importance in relation to evolution, and to interpret the theories of Darwin.

For learning outcome 2, tutors should introduce breeds of common small pet mammals, requesting that they investigate the breed society conformities. Learners will demonstrate their understanding through describing and identifying the varieties of, as well as phenotypical traits for, different breeds. Learners will become aware of how the different physical characteristics are present in the pet industry, eg coat colour and pattern, eye colour. Site visits to breeders, shows and pet shops can enhance delivery of this learning outcome. DVDs, photographs and visual and audio materials can be used to stimulate the identification of breeds. Visiting and listening to guest speakers and meeting breeders would benefit delivery. The use of learners' own work experience placements or animal care centres will help to contextualise this learning outcome.

For learning outcome 3, learners need to cover theoretical reasons for and requirements of grooming animals. This could be delivered at the same time as learning outcome 4.

For learning outcome 4, tutors should introduce the skills needed to demonstrate grooming techniques, which must include the demonstration of necessary health and safety procedures, including wearing PPE and disposal of waste. The tutor must emphasise the need to adhere to safe procedures and the relevance of complying with legislation, for example the Animal Welfare Act 2007, the Health & Safety at Work Act 1974 and the Control of Substances Hazardous to Health Regulations 2002. Observations and witness sheets should be used to record demonstrations of grooming.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment

Introduction and overview of the unit.

Assignment 1: The Science Behind Animal Breeding (P1, P2, P3, M1, M2, D1, D2)

Tutor introduces the assignment brief.

Topic and suggested assignments/activities and/assessment
Theory session – Darwin's theory of natural selection and evolution. Interpret and summarise.
Learners research and give examples; natural selection, sexual selection, artificial selection.
Introduce with examples phenotype differences, genetic differences, mutations and hybridisation. How has this enabled manipulation of breed varieties?
Learner research to produce a timeline of domestication for one species. Identifying purpose of selected traits.
Theory session – extinction and ecological niches.
Explanation – benefits of manipulated breeding; disease eradication and conservation.
Assignment 2: Animal Breeds and Characteristics (P4, P5, P6, M3)
Tutor introduces the assignment brief.
Identify breeds of dog. Describe their breed standards and breed recognition using visual aids.
Identify common breed societies associated with each breed's conformities.
Examples – pictures or photographs – Common fancy cat breeds.
Identify breeds of small mammal species kept as pets from pictures, photographs or live animals.
Assess physical characteristics of a species to its breed standards, including temperament and history from photographs, pictures or live animals.
Describe why pictorial examples or live animals have not met the breed standards due to flaws.
Identify correct colour pigmentation, coat type, markings, coat condition, weight and size conformities for a number of small mammals according to the breed standards.
Describe common problems with a breed's physical and inherited traits.
Assignment 3: Why Groom Animals? (P7, P8, M4, D3)
Tutor introduces the assignment brief.
Explain reasons for grooming animals.
Theory – grooming practices, policies, health and safety, equipment use and maintenance.
Assignment 4: Pet Grooming for Health and Hygiene (P9, P10, M5)
Practical assessment supported through tutor-led input.
Preparation for grooming; assess needs, remove knots, clean the skin and fur; remove dirt from between the toe pads. Adhere to policies, follow procedures and select, clean and maintain equipment.
Practical activity – tutor/expert demonstrates grooming of an animal, upholding relevant legislation and following safe protocols
Practical activity – learner demonstrates grooming an animal, upholding relevant legislation and following safe protocols. They must demonstrate an understanding of accurate handling and approaches, different equipment, and common health signs.

Assessment

For P1, P2, P3, M1, M2 and D1, learners need to demonstrate their understanding of the science behind breed development through supported examples of natural selection, sexual selection and artificial selection. Learners will provide examples of the phenotypical and genotypical differences of animals, using visual aid photographs or pictures to support understanding. Learners will show they understand the advantages and disadvantages of breed manipulation through domestication. This will include key traits selected for the species, with an explanation as to function/purpose. Other positive aspects of domestication and breed development should include explanations of hybridisation in the eradication of disease and conservation of endangered species. Learners could produce written accounts of their summary and explanations.

For P4 and M3, learners will be able to identify common breeds of dogs, cats and small pet mammals, a minimum of three per species. The breed's traits will be included as set out by the breed standards. Learners will explain how they recognised the breed. This can be presented through annotated pictures, photographs, posters or leaflets, or carried out as a practical demonstration and recorded.

For P5, learners will describe the physical characteristics for a range of small animals kept as pets, highlighting their breed standards and including colour pigmentation, markings, coat type, weight and size. Learners will make a judgement of a range of animals based on their conformity to breed standards. They will identify specific traits, coat condition, markings, coat type, size, weight, and colour pigmentation. Common flaws and failings to meet these standards and inherited problems or inbreeding should be included. This can be presented as a practical demonstration or written assignment. Guidance on the use of observational and feedback sheets is available on Edexcel's website.

For P4, learners will demonstrate grooming skills. This will include giving reasons for grooming, preparation before grooming, to include adherence to policies and following procedures, and maintaining equipment. Learners will uphold health and safety and ensure the welfare of the animal. Learners will demonstrate a number of grooming techniques including brushing, combing, trimming and de-matting. Learners must consider their performance, handling techniques, and how they would minimise and manage stress should the animal respond negatively. Grooming techniques should be in accordance with the industry requirements, ie length of blade to use on parts of the body, hand scissors, hand stripped coat or clipped, the skirt, eyebrow and ear hair plucking, clean face and head, thigh patterns, paw patterns, type of brush or comb to be used depending on the state of the coat.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P1, P2, P3, M1, M2, D1, D2	The Science Behind Animal Breeding	You work for a veterinarian hospital and have been asked by a local school to provide information on the principles of animal breeding. You need to investigate the application of theories, with examples to demonstrate the principles and their application in real life.	Written summaries. Examples and interpretations of examples.
P4, P5, P6, M3	Animal Breeds and Characteristics	As part of an open day where children from the school visit the hospital you will be presenting information on animal breeds and breed societies. You need to identify three breeds of cat, dog, and small mammal and outline the importance of relevant breed societies. You must describe the physical characteristics of a range of commonly kept small pet animals. You need to highlight their breed standards and must include colour pigmentation, markings, coat type, weight and size. Common flaws and failings to meet the breed standards must also be included.	Recorded via video camera and witness statement of checking against breed standards. Observational witness sheet and/or video record of the assessment.

Criteria covered	Assignment title	Scenario	Assessment method
P7, P8, M4, D3	Why Groom Animals?	You need to show the children from school why animals need grooming. You need to describe reasons for grooming a range of small animals, outline their grooming requirements and explain the importance of preparation when grooming animals.	Written summaries. Examples and interpretations of examples.
P9, P10, M5	Pet Grooming for Health and Hygiene	You will demonstrate your skills in grooming an animal. You must uphold relevant policies, protocols and legislation.	Witness observation and checklist.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite. This unit has particular links with the Level NOS in Preparation and grooming of dogs and prepare and groom animals.

Level 2	Level 3
Element AC9.1 Prepare animals for grooming Element AC9.2 Groom animals	Understand Animal Welfare and Breed Development
Undertake Work Related Experience in the Land-based Industries	Undertake Dog Grooming
Maintain Animal Accommodation	
Introduction to the Principles and Practices of Animal Behaviour and Handling	
Maintain Animal Health and Welfare	
Contribute to the Care of Exotic Animals	
Contribute to the Nursing of Animals	

Essential resources

Learners will need access to the appropriate environment or facilities and equipment required for the activities, as well as to resources related to recording activities. Practical grooming facilities and equipment may include grooming tables, hydraulic and hydrobaths, shower unit, blasters, drying cabinet, hand and stand driers, range of scissors including left-handed scissors, shears, single and double-sided thinning scissors, brushes, combs, electric clippers, stripping knives, coat kings, dematting equipment, muzzles, halters, restraint equipment, shampoos and conditioners and holding cages.

Learners must have access to a range of animals of different breeds and coat types.

Suitable protective clothing must be available for all learners.

Employer engagement and vocational contexts

This unit focuses on practical aspects of breed development in animals and will give learners the background knowledge of the science, skills, techniques, tactics and application of identifying common breeds and their physical characteristics. Centres are encouraged to create and develop links with local experts in the breeding and showing of small pets. This could be via guest lectures, or visits to see their work in action. When learning about the practical element of grooming different breeds of animal, learners should be encouraged to uphold health and safety and follow standard policies and procedures and meet legal frameworks. Work placement providers can be used to help learners contextualise the different breeds in the industry. Assessment by work providers should be via feedback and observational witness sheets.

Textbooks

Alderton D, Edwards A, Larkin P and Stockman M – *The Complete Book of Pets and Pet Care* (Anness publishing limited, 2007) ISBN 9780754816614

Coile D C – *Encyclopaedia of Dog Breeds* (Barron's Educational Series, 2005) ISBN 9780764157004

Cutts P – *Cat Breeds Identifier* (Apple Press, 2000) ISBN 9781840923049

Fogle B and Lucas S – *New Encyclopaedia of the Dog* (Dorling Kindersley, 2000) ISBN 9780751304718

Geeson E – *The Ultimate Grooming* (Interpet Publishing, 2003) ISBN 9781860542527

Hill L – *Pet Owner Guide to the Rat* (Ringpress Books Ltd, 1998) ISBN 9781860541056

Kalstone S – *The New Complete Poodle Clipping and Grooming Book* (Howell Book House, 2000) ISBN 9780876052655

Kennel Club – *The Kennel Club's Illustrated Breed Standards* (Ebury Press, 2003) ISBN 9780091890285

Khol S – *All Breed Dog Grooming Guide* (AARONCO, 2002) ISBN 9780964607248

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

Pinney C – *Guide to Home Pet Grooming* (Barron's Educational Series, 2005) ISBN 9780764128479

Websites

Breed Standards; Rabbits	www.thebrc.org/stds.html
British Hamster Association	www.britishhamsterassociation.org.uk
Fancy rat society	www.nfrs.org/kitbag.html
Pet directory: dogs, cats, small mammals	www.pet-directory.net/index.html
The Governing Council of the Cat Fancy	www.gccfcats.org
The Kennel Club	www.the-kennel-club.org.uk

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	researching and summarising information on natural selection producing a planned timeline of domestication from their research
Self-managers	grooming animals within planned time and resources managing their practical demonstrations
Effective participators	analysing issues of domestication and breed development in animals and writing up findings on the impact of humans over time.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	researching and investigating the principles of breed development science
Creative thinkers	presenting work using a variety of media: posters, leaflets, essays
Reflective learners	reflecting on their grooming performance, as encouraged by the tutor
Team workers	setting tasks for the assignment in groups: presentations, research or investigations
Self-managers	setting practical tasks such as breed assessments and grooming activities within a timeframe
Effective participators	discussing different ways to approach animals when handling them for grooming and the many impacts that humans have had on breed standards over time.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	<p>researching the internet for the appropriate breed standards and conformities</p> <p>researching the internet for information on natural selection and survival of the fittest</p> <p>researching information on domestication of breeds over time</p> <p>researching the impacts of domestication</p> <p>planning a timeline of domestication</p>
ICT – Develop, present and communicate information	
<p>Enter, develop and format information independently to suit its meaning and purpose including:</p> <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing assessments using ICT programmes: leaflets, posters, information sheets on breed standards
Bring together information to suit content and purpose	<p>producing assessments using ICT programmes: leaflets, posters, information sheets on ecological niches, Darwin's theory on natural selection and Jared Diamond's theory on domestication</p> <p>producing assessments using ICT programmes: leaflets, posters, information sheets on hybridisation, mutation, extinction</p>
Present information in ways that are fit for purpose and audience	producing assessments using ICT programmes: leaflets, posters, information sheets

Skill	When learners are ...
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	<p>discussing breed conformities and flaws</p> <p>discussing preparation of breeding and management of animals</p> <p>listening to guest speakers and learning how to groom</p> <p>listening to experts on breeds and breed standards</p>
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	<p>researching information on the science of breed development</p> <p>researching information on human selection of traits and the impacts of this</p> <p>researching information on common skin and coat conditions</p> <p>comparing grooming techniques</p>
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	<p>presenting findings on natural selection and survival of the fittest and the science of breed development</p> <p>presenting findings on the impacts of human selection for a range of breeds and therefore breed societies</p> <p>explaining reasons for grooming.</p>



Unit 12: Understand the Principles and Practices of Animal Establishments

Unit code: H/600/9349

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of animal establishments and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

An appreciation of the diversity of work available with animals and the principles that underpin a professional approach to that work is essential for those employed in the animal care industry. It is also vital in informing career choices and progression to higher levels of education and training.

Learners will gain an insight into employment in animal establishments and the sort of work that they would be required to carry out on a daily basis. Animal establishments can range from kennels and catteries to zoos and wildlife parks.

On successful completion of this unit, learners will have the knowledge they need to carry out safe and effective working practices in animal establishments, from booking an animal in, to caring for it during its stay. The unit will also give learners the background to relevant legislation and administration procedures used in animal establishments.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the purpose of a variety of animal establishments
- 2 Be able to carry out daily cleaning and husbandry routines in an animal establishment
- 3 Know animal establishment administrative procedures
- 4 Know how to respond to problems and emergencies in animal establishments.

Unit content

1 Know the purpose of a variety of animal establishments

Animal establishments: kennels, catteries, zoos, wildlife parks, pet shops, private collections, breeding establishments, farms, laboratories; rescue centres; grooming parlours; vets; animal training establishments

Purpose: public display; food production; animal rescue; research; breeding; retail; keeping animals as pets; grooming; animal health; education

Ancillary services: additional services provided by the establishment to generate income eg gift shop, grooming parlour, pet pharmacy

2 Be able to carry out daily cleaning and husbandry routines in an animal establishment

Daily cleaning routines: walls; floors; animal bedding; food and water bowls or receptacles; public areas; food preparation areas; PPE; hygiene; use of disinfectants and cleaning agents

Husbandry routines: feeding; cleaning; health checking; maintenance; medicating; grooming; maintenance of good animal welfare standards

3 Know animal establishment administrative procedures

Administrative procedures: booking in and out systems; taking telephone calls; keeping records of animals; staff and animal vaccination records; customer complaints; face-to-face dealings with customers; licensing requirements; current relevant codes of practice and legislation eg Animal Welfare Act, Health and Safety at Work Act, Control of Substances Hazardous to Health, Animal Establishments Act, Zoo Animals Act; how legislation affects work in animal establishments

4 Know how to respond to problems and emergencies in animal establishments

Problems and emergencies: illness of animal; illness of customer; death of an animal; fighting between animals; animal attack; animal injury eg falling and breaking limbs; animal illness eg seizures or stroke; escape of an animal; unwanted breeding

How to respond: emergency first aid procedures; who to report problems to; reporting problems to an animal's owner/carer; limitations; calling the vet; approaching, handling and restraining the animals in question

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the purpose of specified types of animal establishment [CT, SM, IE]	M1 explain how a specified animal establishment achieves its purpose	D1 evaluate ancillary services provided by a range of animal establishments
P2 describe ancillary services that could be provided by animal establishments [CT, SM, IE, RL]		
P3 carry out cleaning of the following areas in the work environment: <ul style="list-style-type: none"> • staff facilities • animal accommodation • public areas • food preparation areas [TW, EP]	M2 carry out appropriate cleaning and husbandry routine and non-routine planning	D2 evaluate a given animal establishment's husbandry routine making suggestions for improvement
P4 perform daily husbandry and exercise routines for animals kept in animal establishments [TW, EP, IE, CT]		
P5 demonstrate methods of waste disposal in animal establishments that minimise environmental damage [TW, CT, EP, RL]		
P6 describe the different licensing requirements for animal establishments [SM, IE, CT, RL]	M3 explain how a given piece of legislation affects working practices in a specified animal establishment	
P7 identify the types of records kept in an animal establishment and the importance of keeping them [SM, IE, CT, RL]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P8 identify current legislation and codes of practice relating to: <ul style="list-style-type: none"> • animal welfare • health and safety in animal establishments • environmental issues [SM, IE, CT, RL]		
P9 describe actions to be taken in response to given animal problems [SM, IE, CT, RL]	M4 describe, in detail, accident and emergency responses to given scenarios in animal establishments.	D3 explain a given animal establishment's emergency procedures for given animal problems, and make justified suggestions for improvement.
P10 describe appropriate procedures to follow in given emergency and accident situations. [CT, RL, SM, EP, TW]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Tutors delivering this unit have opportunities to use as wide a range of techniques as possible. Lectures, discussions, seminar presentations (including the use of simulation and role playing), site visits and practicals, research using the internet and/or library resources and the use of personal and/or industrial experience would all be suitable delivery methods. Delivery should stimulate, motivate, educate and enthuse the learner.

Work placements should be monitored regularly to ensure the quality of the learning experience. Learners and supervisors should be aware of the requirements of this unit prior to any work related activities, so that naturally occurring evidence might be collected at the time. For example, learners may have the opportunity to observe animal behaviour indicating possible problems, to follow procedures for record keeping or to carry out appropriate animal husbandry procedures, and they should be encouraged to ask for observation records and/or witness statements to be provided as evidence. If assessed directly by the tutor, suitable evidence from guided activities would be observation records completed by the learner and tutor. If assessed during a placement, witness statements should be provided by a suitable representative and verified by the tutor. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Tutors must stress the importance of animal welfare issues and the need to manage the resource using legal methods.

Health and safety issues relating to working with animals must also be stressed and regularly reinforced, and risk assessments must be undertaken prior to practical activities. Learners should be taught safe working practices by demonstration and supervised practical work. Thereafter they should be given sufficient time and guidance to develop practical skills. The underpinning principles of acceptable husbandry explored in this unit should be related to practical work undertaken and referred to during practical work in order to help learners associate theory and practice.

In order to successfully complete this unit, learners should have to plan the, maintenance and monitoring of animal accommodation for a variety of species, depending on the establishments being used for delivery of this unit.

Learners of all abilities should have access to animals with the emphasis on health and safety and animal welfare at all times.

It would be beneficial if learners were given appropriate access to a variety of animals, but animal welfare is of paramount importance and this is likely to involve careful planning to prevent stress to or suffering of the animals.

Learners should be encouraged to carry out independent research for this unit, to allow for guided development of research and independent thinking skills.

Tutors should also be encouraged to formulate links with external animal care organisations to provide a 'real' view of animal establishments. This could be done via both visits to animal establishments and guest lecturers from organisational professionals such as representatives from animal rescue centres, animal experts, zoo keepers, vets and vet nurses.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to unit and animal care and research facilities eg LRC.
Assignment 1: Animal Establishments (P1, P2, M1, D1)
Tutor to introduce assignment brief.
Theory: animal establishments, purposes, ancillary services.
Visits to a range of animal establishments to carry out research for the unit.
Learners research and present evidence on the purpose and function of given animal establishments.
Assignment 2: Husbandry Routines (P3, P4, P5, M2, D2)
Tutor to introduce assignment brief.
Practical activity: husbandry routines and cleaning animal establishments.
Theory: planning and evaluating husbandry routines.
Assignment 3: Administrative and Legislative Requirements (P6, P7, P8, M3)
Tutor to introduce assignment brief.
Theory: legislation and licensing requirements for animal establishments.
Theory: records and administrative procedures.
Assignment 4: Animal Emergencies (P9, P10, M4, D3)
Tutor to introduce assignment brief.
Theory.
Emergency first aid at work.
Practical activity: dealing with emergency situations, role play and first aid demonstrations practice.
Practical assessments for dealing with emergencies.
Unit review.

Assessment

For P1, learners are required to describe the purpose of specified types of animal establishments. Evidence could be a written assignment or poster presentation which could incorporate P2, where learners need to describe ancillary services provided by the establishments. To achieve M1, learners should explain how a specified animal establishment achieves its purpose. This could be in the form of a written assignment. It could be extended for D1, where learners need to evaluate a minimum of three ancillary services that animal establishments already provide for range of products/services and access to clients. This information could be obtained from visits to animal establishments.

For P3, learners are required to clean various areas in the working environment. For P4, they should carry out daily husbandry routines and demonstrate methods of waste disposal to minimise environmental damage for P5. This could all be a practical assessment carried out at either the centre's own animal care

facilities, or in an animal establishment on work experience, evidenced by work experience report forms and photographs. The assessment could be extended for M2, where learners could produce a husbandry plan for both routine and non-routine husbandry in a variety of animal establishments agreed with the tutor. For D2, a similar theme would continue, with learners evaluating a given animal establishment's husbandry routine. Ideally, this should be obtained from the tutor when visiting animal establishments and all learners could be given the same establishment to evaluate. If not, the tutor should source a suitable high quality case study and distribute it to learners to use.

For P6, P7, and P8, learners need to describe licensing requirements and identify records and legislation and codes of practice related to animal establishments. This could be evidenced by a written assignment with a set of questions for learners on licensing, records and legislation. To extend this and achieve M3, learners should explain how a given piece of legislation, such as animal welfare or health and safety legislation (agreed with the tutor) affects working practices in an animal establishment. This could be a written piece of work.

For P9 and P10, learners should describe actions to be taken in response to given animal problems and appropriate procedures to follow in these situations. This could be a poster to be displayed in the centre's animal care unit. For M4, learners could create an induction pack, including leaflets, video, flipchart or podcast, for a new employee at an animal establishment to inform them of the potential accidents and emergencies they may encounter, and what procedures to follow if they do occur. Finally for D3, learners need to obtain and explain a given animal establishment's emergency procedure for a given situation, which could be obtained from a work experience provider, and then make justified suggestions for improvement. This outcome could also be linked to an emergency first aid at work course, which learners could attend as part of their course, depending on the centre.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, M1, D1	Animal Establishments	You work for an animal care centre and have been required to create a poster that describes the purpose of animal establishments and related ancillary services. It can be extended as a written assignment for M1 and D1.	Poster. Written assignment.
P3, P4, P5, M2, D2	Husbandry Routines	Learners need to be observed providing husbandry to animals in an establishment, although this could be obtained from work experience reports and photographs. Again, it could be extended into a plan of husbandry and evaluation of an establishment's existing husbandry plan for M2 and D2.	Practical assessment. Written assignment.

Criteria covered	Assignment title	Scenario	Assessment method
P6, P7, P8, M3	Administrative and Legislative Requirements	Learners need to complete a written assignment on licensing requirements, records and legislation. This could be in response to short answer questions formulated by the tutor. For M3 the tutor should give learners an establishment and a piece of legislation to evaluate the effects of the legislation on working practices and whether the establishment's policy meets current legislation.	Written assignment. Responses to short answer questions.
P9, P10, M4, D3	Animal Emergencies	Learners need to list the procedures to follow in an animal emergency, and then extend it further to create an induction pack for a new employee at the facility. For a higher grade, learners should explain an establishment's emergency procedure, eg from their work experience placement.	Leaflet, video, flip chart or podcast. Written assignment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
AC8.1 Remove excess hair; knots and tangles prior to bathing and grooming AC8.2 Bathe and clean a dogs coat and skin AC28.1 Dry dogs and prepare their coats for styling	Undertake Pet Store Design and Animal Management
Maintain the cleanliness and bio security of the animal care working environment Provide controlled exercise opportunities for animals	Undertake Kennel and Cattery Management
Undertake Work Related Experience in the Land-based Industries	Understand the Principles of Zoological Animal Health and Husbandry
Maintain Animal Accommodation	
Introduction to the Principles and Practices of Animal Behaviour and Handling	
Maintain Animal Health and Welfare	
Environmental and Land-based Business	
Introduction to Animal Breeds and Grooming	

Essential resources

For this essentially practical unit, learners must have adequate and regular access to a variety of animals, their accommodation and maintenance equipment, as well as visiting external animal establishments carry out research and gather the evidence that they need. The use of animals would involve careful planning

so animals are not overused and their health and wellbeing is not compromised. The establishments that learners have this access to will depend on the feasibility and proximity of visits to these locations.

Employer engagement and vocational contexts

Learners can be introduced to a variety of professionals from different companies and organisations such as vets, RSPCA officials, animal care representatives, breeders etc. to broaden their depth of knowledge and make the learning experience interesting and contextualised. This could be through either guest lectures or off site visits to different establishments. All sites should be checked for health and safety before the visits.

Indicative reading for learners

Textbooks

- Alderton D – *You and Your Pet Bird, 1st Edition* (Dorling Kindersley, 1992) ISBN 9780751301571
- Benyon P H et al (editors) – *BSAVA Manual of Exotic Pets* (British Small Animal Veterinary Association, 2002) ISBN 9780905214474
- Brown M and Richardson V – *Rabbitlopaedia, 1st Edition* (Ringpress Books, 2000) ISBN 9781860541827
- Dallas S – *Animal Biology and Care, 1st Edition* (Blackwell Science, 2002) ISBN 9780632050543
- Evans J M and White K – *Catlopaedia, 2nd Edition* (Ringpress Books, 2003) ISBN 9781860540189
- Evans J M and White K – *Doglopaedia, 2nd Edition* (Ringpress Books, 2002) ISBN 9781860540745
- Girling S – *Veterinary Nursing of Exotic Pets* (Blackwell Publishing, 2003) ISBN 9781405107471
- Manning D – *Collins Exotic Pet Handbook* (Collins, 2003) ISBN 9780007142583
- Poole T – *UFAW Handbook on the Care and Management of Laboratory Animals*:
- Raiti P and Girling S (editors) – *BSAVA Manual of Reptiles* (British Small Animal Veterinary Association, 2004) ISBN 9780905214757
- Terrestrial Vertebrates, 7th Edition* (Blackwell Science, 1999) ISBN 9780632051311
- Warren D – *Small Animal Care and Management, 2nd Edition* (Thompson Learning, 2000) ISBN 9780766814240

Websites

- | | |
|--|--|
| British and Irish Association of Zoos and Aquariums | www.biaza.org.uk |
| Department for Environment, Food and Rural Affairs | www.defra.gov.uk |
| Guide Dogs for the Blind Association | www.gdba.org.uk |
| Laboratory Animals Veterinary Association | www.lava.uk.net |
| PDSA | www.pdsa.com |
| Royal Society for the Prevention of Cruelty to Animals | www.rspca.org.uk |
| Universities Federation for Animal Welfare | www.ufaw.org.uk |

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	describing the purpose of animal establishments and ancillary services performing daily husbandry routines describing legislation, records, licensing requirements describing actions to be taken in an animal emergency
Creative thinkers	describing the purpose of animal establishments and ancillary services performing husbandry routines demonstrating methods of waste disposal describing licensing, records and legislation describing action to be taken in an animal emergency
Reflective learners	describing ancillary services demonstrating methods of waste disposal describing licensing requirements, records kept and legislation describing actions to be taken in emergencies and appropriate procedures to be followed
Team workers	carrying out cleaning and husbandry routines demonstrating methods of waste disposal describing appropriate procedures to follow in emergencies
Self-managers	describing the purpose of animal establishments and ancillary services describing licensing requirements, records kept and legislation describing actions to be taken in emergencies and appropriate procedures to be followed
Effective participants	carrying out cleaning and husbandry routines, demonstrating methods of waste disposal describing actions to be taken in emergencies and appropriate procedures to be followed.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out research activities related to the unit evaluating and carrying out extended thinking
Creative thinkers	asking questions to extend their thinking during lectures and practical sessions trying out alternative or new solutions to establishments and their current arrangements for husbandry and ancillary services adapting ideas as circumstances change, eg changes to animal welfare legislation

Skill	When learners are ...
Reflective learners	<p>identifying opportunities for change to animal establishments and their own achievements</p> <p>setting goals for themselves to achieve, eg conquering a fear of handling an animal</p> <p>reviewing progress in practical tasks and coursework</p>
Team workers	<p>working with others to carry out planning and monitoring of husbandry in animal establishments and group activities in class</p> <p>reaching clear agreements regarding who is doing which task during practicals</p> <p>working together in animal establishments or on work experience</p>
Self-managers	<p>showing initiative and commitment to animals and their healthcare</p> <p>dealing with pressures in an emergency animal situation such as an escape or attack</p> <p>managing emotions when it comes to animal welfare and healthcare</p>
Effective participators	<p>discussing issues of concern when checking an animal's accommodation or finding an animal in a less than ideal welfare situation</p> <p>identifying improvements to current animal welfare regimes, including their accommodation needs</p> <p>influencing others on their animal accommodation maintenance regimes and standards.</p>

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	encourages learners to complete their coursework using ICT facilities, using smartboards and PCs in class, using interactive materials for teaching and learning, researching subjects on the internet
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none">• text and tables• images• numbers• 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, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	making use of mathematics to suggest weights of animals and medication to suit their needs, dosage of supplements per size of animal, and gathering and analysing weights of animals for health care evaluations
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reading material on English skills from a variety of sources for their assignment work. Encouraging reading around subjects and produce clear and concise documents using correct animal health terminology for the unit
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	presenting information to a group of people for the unit, and this should ideally be done in a classroom situation with their peers.
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	



Unit 13: Contribute to the Care of Exotic Animals

Unit code: K/600/9353

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of exotic animal care and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Working with exotic animals and keeping them as pets are becoming increasingly popular as the public's knowledge and interest in these animals increases. This unit is designed to enable learners to develop knowledge and understanding of the basics needed to look after a range of exotic species, from everyday healthcare and accommodation needs to health and behaviour. It is hoped that through learners gaining this information, they will contribute to increasing the welfare standards of exotic species kept in captivity, from sourcing them ethically to looking after their most basic needs.

On completion of this unit learners will be able to recognise the importance of nutrition, health, accommodation design and maintenance to the welfare and wellbeing of exotic animals. Learners will demonstrate effective handling and restraint of exotic animals and describe effective transportation arrangements for them.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to prepare and maintain appropriate accommodation for exotic animals
- 2 Know how to source and transport exotic animals
- 3 Understand the nutritional requirements of exotic animals
- 4 Be able to monitor the health, behaviour and welfare of exotic animals.

Unit content

1 Be able to prepare and maintain appropriate accommodation for exotic animals

Prepare accommodation: fixtures and fittings; substrate; temperature; lighting; space; location; lighting; health, safety and security; access; hiding places; ventilation; humidity

Maintain accommodation: cleaning – regular spot cleans and full cleans; frequency of cleaning; materials and equipment used for cleaning and maintenance (including specialist non-toxic disinfectants); checking for hazards; risk assessment; health, safety and security

Types of accommodation: vivarium; terrarium; aquarium; accommodation for terrestrial, arboreal and aquatic species; accommodation for breeding; isolation; recovery from illness

2 Know how to source and transport exotic animals

Sourcing exotic species: wild caught; captive bred; captive born; captive farmed; long-term captive; Convention on International Trade in Endangered Species (CITES); current relevant legislation eg Dangerous Wild Animals Act 1976; health and welfare of animals

Ethical transporting of exotic species: methods; equipment; suitability; relevant current legislation and welfare codes; health and welfare of animals during transit; monitoring animals during transit; Welfare of Animals in Transit Order

3 Understand the nutritional requirements of exotic animals

Nutritional requirements: dietary requirements; variety and range of foods; availability of foods; captive care and ethical considerations of live animals used as food (eg crickets); dietary supplements eg calcium; relationship of the size of prey to size of predator; suitability of prey to replicate natural feeding; plant and vegetable matter used as food; methods and equipment used to present food; hygiene considerations; effects of poor nutrition

Constituents of foods and their function: carbohydrates; proteins; fats; vitamins; minerals; water

Variation according to need: life stage (young, adult, pregnant, gravid; lactating, elderly, ill); species requirements eg natural habitat; size; hibernation

4 Be able to monitor the health, behaviour and welfare of exotic animals

Health monitoring: signs of health eg pain, posture, movement, sleep patterns, restlessness, coat, eyes, ears, mouth, skin swellings, lameness, mucous membranes, appetite, water intake, urine and faeces output, weight change, discharges (vaginal, nasal, aural, ocular, oral), vomiting, coughing

Behaviour and welfare monitoring: visual observations of normal and abnormal behaviour according to species, breed, sex, individual and life stage; social interaction for community species; hibernation; record keeping (techniques and analysis)

Welfare: Five Animal Needs and their relationship to exotic animals; providing enrichment and natural habitat; minimisation of stress

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 prepare accommodation of suitable size and dimension for exotic animal species which meets their environmental requirements [TW, SM, EP]	M1 describe the care of specified exotic animal species covering accommodation, maintenance, hygiene, appropriate sources of purchase, handling and restraining equipment	D1 evaluate alternative accommodation types for specified exotic animal species
P2 carry out routine maintenance and hygiene procedures necessary for exotic animal species in captivity [TW, SM, EP]		
P3 identify legal and reputable sources for purchase and acquisition of exotic animal species [CT, IE, SM]		
P4 describe arrangements for exotic animal species transportation which meet current standards and legislation [CT, IE, RL]	M2 summarise different methods of transport available for specified exotic species, and the equipment used	D2 evaluate different methods of monitoring and transporting exotic animal species at different life stages
P5 state legislation relevant to keeping of exotic animal species in captivity [CT, IE, RL, EP]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P6 explain how the nutrient requirements of exotic animal species can be provided via a balanced diet [CT, RL, IE, TW]	M3 plan suitable diets and feeding regimes for three exotic animal species, stating the constituents of the diet and how they contribute to a balanced diet	D3 evaluate feeding plans for exotic animal species, suggesting appropriate improvements
P7 discuss how the life stage, health status and environment cause variation in the feeding of exotic animal species [CT, RL, IE, TW]		
P8 report on the signs of health and behaviour in exotic animal species [CT, RL, IE, SM]	M4 plan a health and behaviour monitoring chart that could be used to check three different exotic animal species.	D4 suggest improvements to the diet, environment, enrichment and general husbandry of an exotic animal species.
P9 demonstrate correct handling and restraint techniques for exotic animal species [SM, IE, CT, RL, TW]		
P10 report on factors that are necessary to achieve acceptable welfare standards when keeping exotic animal species in captivity.		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Learners should have opportunities to practise using practical skills with a variety of exotic animal species from the following categories: mammal, insect, amphibian, reptile and bird. Emphasis should be on practical delivery and assessments where possible, with adequate time for learners to prepare for these assessments.

All learners should have access to the animals, the emphasis being on health and safety and animal welfare at all times. Careful planning is needed to ensure that animals are not stressed or overused.

Learners should be encouraged to carry out independent research, to allow for guided development of research and independent thinking skills.

Tutors should also be encouraged to formulate links with external animal care organisations to provide a 'real' view of exotic animal care and how it relates to the overall health and welfare of animals. This could be via both visits to animal collections and guest lectures from professionals such as zoo keepers or private collectors.

Learners may benefit from a visit to a Customs and Excise animal department, as they can gain a real insight into how animals are usually transported, both legally and illegally, and the impact of this on the animals.

Learning outcome 1 is likely to be delivered by formal lecture, supervised practical sessions, site visits and demonstration. Learners will study the different types of accommodation required by different exotic animal species and their related management regimes. This can be achieved using on-site animal care facilities, by visits to animal establishments (eg zoological collections) and/or work experience placements. Visits to breed shows and trade exhibitions will give learners the opportunity to meet suppliers of animal housing to inspect new facilities. It is particularly important to cover relevant legislation, international agreements and the roles of organisations and authorities relating to the importation and keeping of exotic animals.

Learning outcome 2 requires learners to appreciate the sourcing and transportation of exotic animals and this could be developed through a series of lectures, demonstrations and learner investigation. Any movement of animals should be planned to minimise stress. It would be inappropriate for any animal to be moved a number of times consecutively for the sake of multiple learners' teaching and/or assessment.

Learning outcome 3 is likely to be delivered through formal lecture and through the practical scientific analysis of the components of food items in the laboratory. Learners will develop the dietary requirements of exotic animals and the different constituents of foods and their role in the diet. Analysis of current food packaging labels will be important to make the learners aware of the role of different nutrients, supplements and additives in foodstuffs. Tutors must ensure that live feed items, eg crickets are kept with care in suitable accommodation to ensure their welfare until they are used as feed items. Access to the internet and/or relevant library materials would aid delivery and the learners' ability to research the topics.

Learning outcome 4 is likely to be delivered through a series of demonstrations and supervised practicals. Learners would benefit from work placements or by working in a centre's own animal care facilities. The learner will develop observational skills and develop ideas as to how behaviour, health and welfare can be monitored, recorded and analysed. Visiting expert speakers, such as animal welfare officers or animal keepers, could add to the relevance of the subject for the learner.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to the unit and the animal care facilities of the centre.
Assignment 1: Exotic Animal Husbandry (P1, P2, P3, P5, P9, P10, M1, D1)
Tutor to introduce the assignment and related research.
Practical activity: accommodation and equipment for exotic animals, handling and restraining.
Theory: sources of exotic animals, legislation, equipment for handling and restraining.
Assignment 2: Transporting Exotic Animals (P4, M2, D2)
Tutor to introduce the assignment and related research.
Theory: transporting exotic animals, legislation relating to keeping exotic animals as pets – research and class tasks.
Visit to a Customs and Excise animal department to see how exotic animals are transported.
Practical activity: feeding exotic animals and examining their food requirements.
Assignment 3: Feeding Exotic Animals (P6, P7, M3, D3)
Tutor to introduce the assignment and related research.
Theory: feeding exotic animals, constituents of feed, nutritional requirements, life stages.
Assignment 4 – Health and Behaviour and Welfare of Exotic Animals (P8, M4, D4)
Tutor to introduce the assignment and related research.
Theory: health signs, illness and abnormal behaviour in exotic species.
Practical activity: health and behaviour monitoring of exotic animals.

Assessment

For P1 and P2, learners need to prepare and maintain accommodation for one exotic animal species. This should be carried out as a practical assessment. It is expected that not all learners will be familiar with exotic animal species, and some learners may be nervous around them. These learners should be given time and encouragement to complete P1 and P2. Evidence of practical achievement could be captured using Witness Statements and/or Observation Records.

For P3, learners are required to identify legal and reputable sources of a minimum of two exotic animals. This could be done in a written assignment or response to short-answer questions.

For M1, learners need to describe the care of two specified exotic animal species. This must include accommodation, hygiene, maintenance, legal and reputable sources of purchase and handling and restraining equipment available. This could be evidenced through an oral presentation or production of factsheets.

For D1, learners are required to evaluate different types of accommodation available to the exotic animals used in M1. This research could be carried out using magazines or journals and the internet to obtain the most current and innovative ideas. Evidence could be by way of an extension to that provided for M1.

For P4, learners are required to describe arrangements for transporting exotic species which meet standards and legislation, and for P5 state the legislation involved related to keeping exotic species in captivity. This could be evidenced through a written assignment or a poster presentation that discusses the key points.

For M2, learners are required to summarise different methods of transporting two specified exotic animal species and the equipment available to transport them. This could be in the form of labelled diagrams, and/or a short written report.

For D2, learners need to evaluate different methods used to transport and monitor exotic animals. This could be evidenced in a written format.

For P6 and P7, learners are required to discuss the nutrition for two specified exotic animals. This could be a written report or poster. For M3, learners need to plan the diets and regimes for the same exotic species, and break these down into the individual nutrients contained within each part of the diet. They also need to state how these contribute to a balanced diet.

For D3, learners are required to evaluate (eg the centre's own) feeding plans for exotic species at different life stages and suggest ideas for improvement.

For P8, learners need to investigate good and ill health and normal and abnormal behaviour in exotic species. This could be carried out as a practical health checking session. For M4, learners could plan a health and behaviour monitoring chart to use to check on the health and behaviour of three exotic animal species.

For D4, learners must suggest improvements in the overall diet and husbandry routines for an exotic animal species to combat any observed signs of ill health and abnormal behaviour. If no ill health or abnormal behaviour is seen, the tutor should give learners problems that could occur with their animal for them to investigate.

For P9, learners are required to select and demonstrate correct handling and restraint techniques and equipment for use on exotic animal species. This should be a practical assessment and it could be tied in with P1 and P2.

For P10, learners need to report on the factors that need to be in place in order that the standard of welfare for exotic animal species in captivity is acceptable. This could be a written report, presentation or poster.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, P3, P5, P9, P10, M1, D1	Exotic Animal Husbandry	You are an animal health inspector who has been asked to review the husbandry of exotic animals kept as part of a specialist animal retailer. You need to carry out a practical assessment of husbandry, handling and restraining techniques used with the exotic species kept. You should create a factsheet about keeping exotic animals to include general care and legal sources of purchase to give to the retailer. You need to research and evaluate two types of alternative accommodation for two exotic animal species kept by the retailer.	Practical. Factsheet. Written report.

Criteria covered	Assignment title	Scenario	Assessment method
P4, M2, D2	Transporting Exotic Animals	You need to create a poster which details how to transport exotic animals and which legislation relates to keeping exotic animals as pets for use by the retailer. You should summarise transport methods and equipment available.	Written assignment/poster.
P6, P7, M3, D3	Feeding Exotic Animals	You must investigate feedstuffs given to exotic species, their constituents and balanced diets for exotic animals. They should then plan diets and feeding regimes for two given species, breaking them down into constituents, and evaluate current feeding plans making suggestions for improvement.	Poster/plan. Written assignment.
P8, M4, D4	Health and Behaviour and Welfare of Exotic Animals	You need to demonstrate you can monitor health and behaviour signs, and plan a monitoring chart that could be used. You should also suggest improvements that could be made in general husbandry to combat signs of observed ill health and abnormal behaviour.	Observation. Health monitoring chart. Written assignment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
Undertake Work Related Experience in the Land-based Industries	Understand the Principles and Carry Out the Practice of Exotic Animal Health and Husbandry
Maintain Animal Accommodation	
Introduction to the Principles and Practices of Animal Behaviour and Handling	
Maintain Animal Health and Welfare	
Contribute to the Nursing of Animals	

Essential resources

The intention of this unit is that learners will build on the knowledge and skills they have learned looking after 'common' animals and then apply, adapt and build on these in the care of more unusual species that they may work with in a zoo or specialist supplier.

Learners should have access to a variety of animal resources:

- birds, eg Macaws, African Greys, Amazons, barn owls, Harris hawks, buzzards, humming birds, toucans, kookaburras, mynah birds
- reptiles, eg chameleons, snakes, iguanas, geckos
- amphibians, eg poison arrow frogs, salamanders
- invertebrates, eg tarantulas, scorpions, mantids

- mammals, eg fruit bats, alpacas, small primates, degus.

Exotics tend to be viewed as those not generally available in the high street or pet superstore. They may have more specialist acquisition sources, eg wild-caught, captive-bred, regulated trade and require more specialist husbandry (accommodation and feeding), more unusual breeding requirements, specialist handling techniques or often minimal handling techniques as they tend to be non-domesticated by nature.

Exotics could also be any 'wild' animal non-native species kept in zoos, eg zebra, kangaroos, penguins etc. Therefore this unit could be undertaken at any centre that has a DWA licence and keeps exotic species, or any collection with a zoo licence.

The animal centre should be equipped with safe and up-to-date accommodation and have adequate feeding, health care and husbandry procedures in place that comply with both animal welfare and health and safety legislation.

Employer engagement and vocational contexts

Centres are encouraged to develop links with animal collections to give learners an insight into alternative ways of looking after exotic animals. This may be vets, zoos, and wildlife parks, rescue facilities or private collections. This could be through either visits to the establishments or guest lecturers from suitable organisations.

Indicative reading for learners

Textbooks

Alderton D – *You and Your Pet Bird, 1st Edition* (Dorling Kindersley, 1992) ISBN 9780751301571

Benyon P H et al (editors) – *BSAVA Manual of Exotic Pets* (British Small Animal Veterinary Association, 2002) ISBN 9780905214474

Dallas S – *Animal Biology and Care, 1st Edition* (Blackwell Science, 2002) ISBN 9780632050543

Girling S – *Veterinary Nursing of Exotic Pets* (Blackwell Publishing, 2003) ISBN 9781405107471

Manning D – *Collins Exotic Pet Handbook* (Collins, 2003) ISBN 9780007142583

Raiti P and Girling S (editors) – *BSAVA Manual of Reptiles* (British Small Animal Veterinary Association, 2004) ISBN 9780905214757

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	identifying legal sources of exotic animals, describing appropriate restraint and handling equipment, describing transportation of exotic animals, discussing legislation, explaining nutrient content of food, discussing life stage nutrition, reporting on good and ill health and normal and abnormal exotic species behaviour selecting equipment appropriate to restrain exotic animals, demonstrating handling and restraining techniques
Creative thinkers	identifying legal sources of exotic animals, describing appropriate restraint and handling equipment, describing transportation of exotic animals, discussing legislation, explaining nutrient content of food, discussing life stage nutrition, reporting on good and ill health and normal and abnormal exotic species behaviour selecting equipment appropriate to restraining exotic animals and demonstrating handling and restraining techniques
Reflective learners	describing appropriate equipment and PPE, describing transport arrangements, stating legislative impact, categorising constituents of food, discussing nutrition of exotic animals, reporting on good and ill health and normal and abnormal behaviour, selecting restraint and handling techniques and equipment
Team workers	preparing and maintaining accommodation for exotic animals, explaining diet, discussing life stage feeding, demonstrating handling and restraint techniques
Self-managers	identifying legal sources of exotic animals, describing appropriate restraint and handling equipment, reporting on good and ill health and normal and abnormal behaviour, selecting restraint and handling techniques and equipment
Effective participators	identifying legal sources of exotic animals, describing appropriate restraint and handling equipment, stating legislation.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out research activities related to exotic animals analysing information on alternative ways of looking after exotic animals
Creative thinkers	asking questions to extend their thinking during lectures and practical sessions trying out alternatives or new ways of providing husbandry for exotic animals adapting ideas as circumstances change, eg new equipment, new information
Reflective learners	identifying opportunities for animal changes and their own achievements setting goals for themselves to achieve, eg conquering a fear of handling an exotic animal reviewing progress in practical tasks and coursework

Skill	When learners are ...
Team workers	<p>working with others to carry out husbandry tasks and group activities in class</p> <p>reaching clear agreements regarding who is carrying out which task</p> <p>working together when caring for exotic animals</p>
Self-managers	<p>showing initiative and commitment to animals and their needs</p> <p>dealing with pressures of an ill animal that is not responding</p> <p>managing emotions when it comes to animal welfare and healthcare</p>
Effective participators	<p>discussing issues of concern when looking after an animal or finding an animal in a less than ideal welfare situation</p> <p>identifying improvements to current animal husbandry and care regimes</p> <p>influencing others in their animal husbandry and care regimes and standards.</p>

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	encouraging learners to complete their coursework using ICT facilities, using smartboards and PCs in class, using interactive materials for teaching and learning, researching subjects on the internet
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none">• text and tables• images• numbers• 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, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	using mathematics to suggest weights of food or animals to suit their needs, dosage of supplements per size of animal, and gathering and analysing weights of animals for health care evaluations
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reading material on the subject from a variety of sources for their assignment work and produce clear and concise documents using correct feeding terminology for the unit
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	learners may also be required to present information to a group of people for the unit, and this should ideally be done in a classroom situation with their peers.
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	



Unit 14: Contribute to the Nursing of Animals

Unit code: Y/600/9347

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of animal nursing and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Understanding how to observe animals and provide basic care is vital for those working within the animal care sector. Animal nursing is a very popular area within the sector and this unit is intended to ensure that learners understand the basics of in-patient observation and care. It also introduces learners to the ethical and legal aspects of veterinary practice, responsibilities towards clients, and general health and safety procedures.

The first part of the unit focuses on developing learners' observation, monitoring and record keeping techniques. They will also gain knowledge of normal health parameters in the most common companion animal species.

The second part involves learners following guidelines for the care of animal in-patients, to include provision of food and water, and giving routine prophylactic medications. The procedures for grooming animal in-patients will also be covered and learners will be able to practise these techniques.

Parts three and four of the unit focus on the aspects of veterinary practice relating to legislation and client care. Learners will gain a knowledge of relevant legislation along with an understanding of the responsibilities of veterinary staff towards clients and their pets.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know how to observe an in-patient
- 2 Be able to provide basic care to an in-patient
- 3 Be able to follow health, safety and hygiene procedures
- 4 Understand veterinary practice client care.

Unit content

1 Know how to observe an in-patient

Signs of health: recognise visual signs of health eg eyes, ear;; nose, mouth, skin/coat, faeces/urine; behaviour; posture; sleep/wake cycles, eating/drinking

Health parameters: normal temperature, pulse, and respiration levels for the common companion animal species eg dogs, cats, rabbit; guinea pigs; methods for taking temperature, pulse and respiration; sites for taking temperature, pulse and respiration (although temperatures should not be taken by learners so as not to cause animals stress)

Monitoring and recording: methods of monitoring and recording; importance of monitoring and recording; observe and record in-patient activities eg movement; posture; behaviour; reporting any problems/ changes

2 Be able to provide basic care to an in-patient

Food and water: range of equipment available for providing food and water; appropriate equipment for in-patient species eg dog, cat, rabbit, guinea pig, reptile; appropriate food for species; presentation of food; time and frequency of feeding; quantity of food and water; monitoring food and water intake

Grooming and exercising in-patients: range of basic grooming equipment for an in-patient; identify appropriate equipment for species/coat type; requirements for grooming an in-patient eg when grooming is required or would not be advised; exercise requirements of in-patients; following procedures; how to exercise and monitor exercise in an in-patient

Routine medication: commonly used worming and flea treatments; methods of applying flea and worm treatments; dosage; contraindications; follow guidelines for treating an in-patient for fleas and worms

3 Be able to follow health, safety and hygiene procedures

Legislation: relevant current legislation eg Animal Welfare Act 2006, Health and Safety at Work Act 1974, Control of Substances Hazardous to Health Regulations 2002 (COSHH), The Report of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR), Veterinary Surgeons Act 1986; standard practice procedures eg accident reporting procedures, management of controlled drugs, safety symbols, hazards and risks, fire precautions, personal hygiene, first aid procedures

Routine disinfection and cleaning: principles and methods of cleaning out in-patient accommodation (antiseptics, disinfectants, routine procedures, sterilisation); use of chemicals (type, action, uses, factors affecting efficacy, contraindications, health and safety); storage of chemicals; dilution of chemicals; health and safety, equipment used to clean different areas

Disposal of waste: clinical waste; non-clinical waste; cadavers; soiled bedding; body fluids; body tissues; cleaning materials

4 Understand veterinary practice client care

Legal and ethical responsibilities: Data Protection Act 2003; client confidentiality; handling complaints; dealing with distressed/difficult clients; emergency procedures; explaining euthanasia; health and safety of clients and their pets; record keeping

Veterinary organisations: roles of major organisations (British Veterinary Association, British Veterinary Nursing Association, Royal College of Veterinary Surgeons)

Record keeping: importance of record keeping; importance of accuracy; procedures for keeping client records; types of records kept eg feed and water intake, medication intake, problems, comments, treatment, medication, suspected/diagnosed illness

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 identify the visual signs of health in an in-patient	M1 describe the purpose of a given in-patient record chart	D1 explain the importance of in-patient information recorded
P2 state normal parameters for temperature, pulse and respiration in animals		
P3 monitor and record an in-patient's behaviour, body posture and movement [IE, TW]		
P4 provide appropriate food and water for an in-patient [CT]	M2 describe a food and water regime for an in-patient	D2 evaluate different methods of providing food and water to an in-patient
P5 carry out routine grooming of an in-patient		
P6 follow guidelines for administering basic medication [RL, SM, EP]	M3 compare the advantages and disadvantages of different cat and dog worming and flea treatments	
P7 work according to current relevant legislation relating to the veterinary environment	M4 describe the use of common disinfectants and cleaning agents used in veterinary practice	D3 justify the use of specific disinfectants for a range of veterinary situations.
P8 carry out routine disinfection and cleaning of an in-patient's accommodation		
P9 follow guidelines regarding disposal of waste	M5 describe the different methods of waste disposal.	
P10 discuss the legal and ethical responsibilities of veterinary practice staff towards clients and their pets		
P11 describe the role of veterinary organisations		
P12 explain why accurate record keeping is important.		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

This unit offers tutors the opportunity to use a wide range of delivery techniques. Lectures, discussions, practical sessions, simulation, site visits and role play are all suitable delivery methods.

Centres with veterinary nursing facilities and/or an animal care unit may use these facilities to deliver and assess this unit. Tutors may use simulation for the in-patient aspect of the unit by using appropriate animals from the centre's animal care facility if no veterinary facility exists. Learners should use the animal care unit as a simulated veterinary practice facility.

For practical aspects of this unit which involve the use of animals, tutors must stress the importance of animal welfare issues and the need to manage the resource using legal methods. Health and safety issues relating to working with animals or any dangerous substances must also be reinforced on a regular basis.

Appropriate work placement in a veterinary practice would be advantageous, but work placements should be monitored to ensure the quality of the learning experience. Learners and tutors should be aware of the requirements of this unit before any work-related activities. This will allow learners opportunities to gather naturally occurring evidence and information, either while on placement or carrying out rota duties in an animal care unit.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Theory sessions: signs of health, normal parameters, appropriate sites.
Introduce methods of monitoring and recording in-patients, discuss and give examples.
Practical sessions related to P1, P2, P3, M1, D1.
Assignment 1: Observing an In-patient (P1, P2, P3, M1, D1)
Tutor introduces assignment brief.
Complete assignment under tutor guidance and using self-directed study.
Theory sessions: in-patient care, food and water, grooming, medication.
Practical sessions related to P4, P5, P6, M2, M3, D2.
Assignment 2: Provide Basic Care for an In-patient (P4, P5, P6, M2, M3, D2)
Tutor introduces assignment brief.
Completion of assignment under tutor guidance and using self-directed study.
Theory sessions: legislation, health and safety and hygiene procedures.
Practical sessions related to P8, P9.
Assignment 3: Health and Safety and Hygiene Procedures (P7, P8, P9, M4, M5, D3)
Tutor introduces assignment brief.
Completion assignment under tutor guidance and using self-directed study.
Theory sessions: client care, veterinary organisations.

Topic and suggested assignments/activities and/assessment

Assignment 4: Veterinary Organisations and Client Care (P10, P11, P12)

Tutor introduces assignment brief.

Complete assignment under tutor guidance and using self-directed study.

Unit review.

Assessment

To achieve a pass grade, learners must successfully achieve all pass criteria.

For P1, learners must be able to identify the signs of normal health in animal in-patients. P2 requires the learner to state the normal temperature, pulse and respiration ranges for the common companion animal species listed in the unit content. Evidence for P1 could be in the form of an annotated diagram or poster, while evidence for P2 could be in tabulated form.

P3 requires learners to monitor an animal's behaviour, body posture and movement and record their findings. This task will involve observation of animals, using learners' observational skills in addition to effective writing skills. If the delivering centre does not have veterinary practice facilities, then observation of animals within an animal care unit can be used with learners treating the animals as in-patients in a veterinary hospital. Evidence for this could be an oral presentation using photographs/video footage, supported by details of the observed animal's activities in written format.

For P4, learners must use the correct equipment to provide appropriate food and water for animal in-patients, as listed in the unit content. It is expected that learners will complete this task as a practical while being monitored by the tutor and asked questions to demonstrate underpinning knowledge.

P5 requires learners to groom an animal in-patient. This is a practical task which must be monitored by the tutor and attention must be given to animal welfare at all times. Evidence for P5 could be a poster including annotated photographs of the learner grooming the animal, with explanations of the equipment used and the reasoning behind using this equipment. Learners should be able to state when it would not be appropriate to groom an in-patient.

P6 involves the learner following guidelines to give worming and flea treatments. This could be simulated as a practical for administering the medications with learners providing written details about the relevant guidelines in either essay or tabulated format.

For P7, learners need to provide details of the main laws relevant to the veterinary environment. This should include the main terms of each law, activities which would contravene each law, and the penalties involved.

P8 is a practical activity requiring learners to clean and disinfect an in-patient's accommodation. Tutors should monitor and assess the activity and ask questions to establish knowledge regarding the chemicals used. Health and safety and CoSHH guidelines for the use of any chemicals must be followed at all times.

For P9, learners must understand, and be able to explain, the guidelines for the disposal of different types of waste found in veterinary practices. This can be either a practical activity, under tutor supervision, or a written report, or a combination of these.

P10 requires learners to research the range of legislation detailed in the unit content. They should also be aware of the ethical aspects of client and patient care. This could be assessed in the form of role play, written assignment, or presentation, or a combination of these.

P11 covers the main organisations involved in the veterinary industry. Learners should research the main aims and objectives of these organisations. This could be assessed by either a written or oral presentation.

For P12, learners need to know the range and types of records kept by veterinary practices and the importance of accuracy. Evidence could be a written report/assignment outcome.

M1 requires learners to describe the purpose of a given in-patient record chart. This must be assessed through the development of a chart for a given animal or case study together with written or oral descriptions of each part.

For M2, learners need to describe a daily food and water regime they have designed for an in-patient. This should include type of food, equipment used and timing/frequency of the presentation of food and water. Learners should describe why the regime they have designed is appropriate for the species they have chosen. This could be assessed through a written or oral description of an in-patient feeding regime produced.

M3 requires learners to compare the advantages and disadvantages of a range of worming and flea treatments. A minimum of three treatments of each species should be covered. Learners could present this as an oral presentation or written assignment.

For M4, learners must cover at least three disinfectants and three cleaning agents. They must include a description of the type of chemical, its action, appropriate use and any factors affecting its efficacy. Any contraindications and health and safety aspects should also be covered.

M5 requires learners to research and describe a minimum of three different types of waste found in veterinary practice and how to dispose of each one safely. Reference to relevant health and safety legislation can also be included.

D1 asks learners to explain why it is important to record the detailed information kept for in-patients using the information included for M1.

For D2, learners should review the different methods of providing food and water for in-patients and evaluate each method with regard to efficacy, ease of management and safety for the animal. Work could be assessed through a written assignment, oral presentation or annotated poster, as long as there is sufficient detail to meet the distinction grade.

D3 requires learners to justify why a minimum of three disinfectants are used for specific situations in a veterinary practice. Learners should be able to state why one disinfectant would be used in preference to another in any particular situation.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P1, P2, P3, M1, D1	Observing an In-patient	You are working in a veterinary practice and have been asked to monitor an in-patient and record what you see. In order to do this effectively, you must know the signs of health and the importance of recording the animal's activities. You will need to create an appropriate record card to fill in and note down all the relevant aspects of the animal's activity. For the record card you have created, you need to explain the importance of the information included. You can take pictures or video footage of the animal to assist you in this task.	Practical assessment plus written work to include any or all of the following: <ul style="list-style-type: none">• annotated diagram• poster• table• short essay• oral presentation.

Criteria covered	Assignment title	Scenario	Assessment method
P4, P5, P6, M2, M3, D2	Provide Basic Care for an In-patient	You must provide a care regime for an in-patient. The regime should include diet, grooming, and flea and worm treatments. Part of this assessment will be practical and involve the grooming of an in-patient. Other information to include is the advantages and disadvantages of various flea and worm treatments and an evaluation of the different methods of providing food and water.	Practical assessment plus written work to include any or all of the following: <ul style="list-style-type: none"> • tables • short essay • poster • photographs • oral presentation.
P7, P8, P9, M4, M5, D3	Health and Safety and Hygiene Procedures	This assessment involves practical and written work. For the practical assessment you must clean and disinfect an in-patient's accommodation and dispose of any waste following relevant guidelines. The written part of the assessment requires you to produce an assignment to include the following. Current relevant legislation for veterinary practice. A list of disinfectants, cleaning materials and their properties. A description of waste disposal methods. For the distinction grade you must justify using specific disinfectants for given situations found in veterinary practice.	Practical assessment plus written work to include any or all of the following: <ul style="list-style-type: none"> • tables • short essay • oral presentation.
PI0, PI1, PI2	Veterinary Organisations and Client Care	Produce a written assignment to include the following information. Legal and ethical responsibilities of practice staff towards clients and their pets. The range of information kept in practice records and the need for accuracy of information. The role of relevant veterinary organisations.	Written assignment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite.

Level 2	Level 3
Undertake Work Related Experience in the Land-based Industries	Understand the Principles of Animal Nursing
Maintain Animal Accommodation	
Introduction to the Principles and Practices of Animal Behaviour and Handling	
Maintain Animal Health and Welfare	
Environmental and Land-based Business	
Contribute to the Care of Exotic Animals	

Essential resources

Learners will need access to the range of animals detailed in the unit content. Where a veterinary practice facility is not available, an animal care unit can be used to simulate the veterinary practice scenarios. In addition to the appropriate environment, facilities and equipment for each activity and resources related to analysis and recording of evidence are required.

Employer engagement and vocational contexts

Any work placements in veterinary practices will enhance the learning experience. Centres are encouraged to develop links with local vets to facilitate placements. Work placements in kennels, catteries or pet shops can also enhance learners' experience in this unit.

Indicative reading for learners

Textbooks

Dallas S – *Animal Biology and Care* (Blackwell Science, 2000) ISBN 9780632050543

Lane D and Cooper B – *Veterinary Nursing, 3rd Edition* (Butterworth-Heinemann, 2003)
ISBN 9780750655255

Masters J and Bowden C – *BVNA Pre-Veterinary Nursing Textbook* (Butterworth-Heinemann, 2003)
ISBN 9780750646949

Journals

Practice Nurse

Veterinary Nursing

Veterinary Record

Veterinary Times

Websites

Blue Cross www.bluecross.org.uk

British Veterinary Nursing Association www.bvna.org.uk

British Video Association www.bva.org.uk

Department for Environment, Food and Rural Affairs www.defra.gov.uk

Environment Agency www.environment-agency.gov.uk

Royal College of Veterinary Surgeons www.rcvs.org.uk

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	planning and carrying out in-patient monitoring and recording
Creative thinkers	adapting food and water provision ideas as circumstances change, eg new equipment, new nutritional information
Reflective learners	questioning own and others' assumptions when discussing legal and ethical responsibilities
Team workers	working with others to care for animals
Self-managers	managing emotions when working with sick animals
Effective participants	discussing issues of concern working with in-patients, seeking resolution where needed.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out health checks, monitoring and recording
Creative thinkers	formulating alternative in-patient grooming and exercise programmes, making comparisons, suggesting reasons for changes
Reflective learners	inviting feedback on in-patient care carried out, dealing positively with praise, setbacks and criticism
Team workers	taking responsibility and showing confidence in teamworking scenarios
Self-managers	working towards in-patient care goals, showing initiative, commitment and perseverance
Effective participants	discussing in-patient issues of concern, seeking resolution where needed.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	using ICT facilities, using smartboards and PCs, using interactive materials for learning, researching animal nursing on the internet
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • 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, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	suggesting exercise and grooming for sick animals to suit their needs and gathering and analysing weights of animals for healthcare evaluations
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading material on the subject from a variety of sources on animal nursing.
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	

Unit 15: Introduction to Caring for Ornamental Aquatics

Unit code: R/600/9363

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of care of ornamental aquatics and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

Fish are the third most popular pet group after cats and dogs, and the most populous, in the UK. This unit introduces the principles of keeping aquatic flora and fauna in aquaria and ponds and the application of this knowledge. It will enable learners to adopt safe working practices and develop a confident and adaptable approach to the management of aquatic life and the use of dry goods in preparation for employment in the aquatics industry. This unit supports this by raising learners' awareness of the different types of fish species kept in the UK. Learners will gain valuable practical experiences of setting up and maintaining both aquaria and ornamental ponds.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the main features of the aquatics industry in the United Kingdom
- 2 Be able to plan and contribute to the set up of a safe, viable aquarium system
- 3 Be able to plan and set up a safe, viable ornamental pond
- 4 Be able to maintain the health of an aquarium's flora and fauna.

Unit content

1 Know the main features of the aquatics industry in the United Kingdom

Main features: sources of fish and equipment eg wholesalers, retailers, importers, dry goods suppliers, feed suppliers, markets; location and size of the UK industry; trends and factors affecting the UK industry eg number of households keeping fish, welfare issues, environmental and health issues relating to the importation of fish; major species of fish; positive and negative issues related to sourcing wild fish and invertebrates (environmental, social, ethical)

Legislation and regulation: current relevant legislation eg Welfare of Animals in Transport Orders, Pet Animal Act 1951, Animal Welfare Act 2006, Wildlife and Countryside Act, The Importation of Live Fish Act 1980 (ILFA), The Diseases of Fish Act 1983, The Prohibition of Keeping or Release of Live Fish (Specified Species) Order 1998; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); EU Wildlife Trade Regulations; The Aquatic Animal Health Regulations

2 Be able to plan and contribute to the set up of a safe, viable aquarium system

Planning and setting up an aquarium system: design criteria and materials used to establish an aquarium; items necessary for setting up an aquarium eg equipment, ornaments, flora and fauna; costs involved in setting up and maintaining aquaria; health and safety requirements

Safety and viability: need for and maintenance of personal hygiene when dealing with aquaria; risk assessment and dangers of working with aquaria eg electricity, water, glass, fish and UV lights; methods used to reduce health and safety risks and hazards; current relevant legislation eg Health and Safety at Work Act 1974

3 Be able to plan and set up a safe, viable ornamental pond

Planning and setting up an ornamental pond: design criteria, size and materials used to establish an ornamental fish pond; items necessary for setting up an ornamental fish pond eg equipment, ornaments, flora and fauna; health and safety; costs involved in setting up and maintaining ornamental ponds

Safety and viability: Health and Safety at Work Act 1974; need for and maintenance of personal hygiene; risk assessment and dangers of working with ornamental ponds eg electricity, water, manual handling; methods used to reduce health and safety risks and hazards

4 Be able to maintain the health of an aquarium's flora and fauna

Flora and fauna of an aquarium: importance of water quality and how to test and maintain temperature, light intensity and stocking regimes; selection of suitable communities of fish and plant species; filtration systems; feeding and impact on maintenance of health of fish and plants

Problems: potential causes of ill health eg poor water quality, parasites; strategies for prevention and/or cure of identified problems eg water change; signs of ill health in flora and fauna; treatment of ill health; regular monitoring of the aquarium environment

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the structure of the aquatics industry in the UK [IE, RL, SM]	M1 investigate and summarise different sources of fish and invertebrate species for use in the UK market and the impact it has on welfare	D1 discuss positive and negative aspects of the sourcing of wild fish and invertebrates
P2 list the common aquatic species kept in the UK [IE, RL, SM]		
P3 describe the ethical issues caused by the importation of fish into the UK		
P4 plan an aquarium to correctly maintain a given species [CT, TW, EP]	M2 monitor the flora and fauna, water quality, temperature and health of fish in an aquarium over a period of time, making suggestions for improvements to increase welfare	D2 formulate, use and evaluate a healthcare and feeding plan for given species in an ornamental pond or aquaria, taking into account legislation, health and safety and fish and invertebrate species welfare.
P5 contribute to the setting up of a safe, viable aquarium system [RL, CT, SM, EP]		
P6 plan an ornamental pond	M3 monitor the flora and fauna, water quality, temperature and health of fish in an ornamental pond over a period of time, making suggestions for improvements to increase welfare.	
P7 contribute to the setting up of a safe, viable ornamental fish pond [CT, TW, EP]		
P8 carry out appropriate water quality tests on a given mature aquarium [RL, CT, SM, EP]		
P9 produce a maintenance schedule for a given mature aquarium [RL, CT, IE]		
P10 carry out a health check regime for given aquarium flora and fauna.		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Delivery of this unit will involve practical assessments, written assessments and visits to suitable collections and will link to work experience placements.

Learners should be encouraged to visit retail and wholesale establishments that are used in the ornamental aquatics industry to gain a real view of what is involved. They also be encouraged to research species of particular interest to them, and the care of these species.

There are both practical and theoretical elements to the delivery of this unit, but the main emphasis at Level 2 should be on the practical aspects.

Learning outcome 1 is likely to be delivered by formal lecture, discussion, site visits and independent learner research. Learners will study the main features, trends and issues of the United Kingdom's aquatics industry. Visiting expert speakers could add to the relevance of the subject for the learner. For example, a fish importer, wholesaler, retailer or ornamental fish farmer could talk about their work and the methods they use.

Learning outcomes 2 and 3 are closely linked, covering the planning and setting up of safe, viable aquaria and ornamental fish ponds. Delivery techniques should be varied. Learners must have access to facilities where aquaria and ornamental fish ponds can be established in a safe, viable manner. Learners should visit sites where aquaria and ornamental fish ponds are already established to see the theory in practice. Formal lectures, discussions, supervised practical sessions and site visits would form part of the delivery of these outcomes. Learners will also develop knowledge and skills through work placements or by working in a centre's own fish or animal care facilities. Terminology associated with health issues should be that generally accepted on an industry basis.

Learning outcome 4 is likely to be delivered through a series of formal lectures, demonstrations and supervised practical sessions. Learners can develop knowledge and skills through work placements or by working in a centre's own fish or animal care facilities. The learner will develop observational skills and ideas as to how flora and fauna in an aquarium are cared for in an acceptable manner. Visiting expert speakers could add to the relevance of the subject for the learner. For example, a worker in an aquatics retail centre or aquarium could talk about their work and the methods they use to maintain the health of the aquatic plants and animals in their care.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to unit and aquatic facilities, health and safety induction.
Visits to ornamental aquatic establishments to gain knowledge and understanding/real experiences of the industry and species within it.
Market structure and environmental issues affecting the fish industry.

Topic and suggested assignments/activities and/assessment

Assignment 1: The Aquatics Industry (P1, P2, P3, M1, D1)

Tutor to introduce assignment and learner-centred research.

Common flora and fauna kept within ponds and aquaria, issues around sourcing of wild fish.

Assignment 2: Aquaria (P4, P5, P8, P9, P10, M2, D2)

Tutor to introduce assignment and learner-centred research.

Practical session – planning and setting up aquaria.

Risk assessments on aquaria, monitoring the aquaria, maintenance including feeding requirements and health care.

Assignment 3: Ornamental Fish Ponds (P6, P7, M3, D2)

Tutor to introduce assignment and learner-centred research.

Practical session – setting up an ornamental fish pond, feeding fish and monitoring fish health and healthcare.

Risk assessments on the ornamental pond, monitoring the ornamental pond.

Assessment

For P1, P2 and P3, learners are required to look at the general structure, species sold and markets for the UK aquatics industry, as well as the environmental issues involved with sourcing fish and other invertebrate species. Learners could be given a case study or selection of species and then carry out market research on their friends and family, to get a real view of the fishkeeping industry in their local area and the UK as a whole. Learners should locate the sources of the species identified in their research and produce a written assignment on how the fish are sourced, issues related to sourcing fish and the impact of taking fish from the wild.

For M1, learners need to investigate and summarise alternative sources for fish and invertebrate species that are used in the UK and how this could potentially impact on their welfare. This could be extended further for D1, by learners discussing both positive and negative aspects of sourcing wild fish and invertebrates. This information could be presented as a written assignment, poster, or presentation.

For P4 and P5, learners need to plan and contribute to the setting up of a safe, viable aquarium, and identify the human health and safety risks associated with this. This would lend itself to learners developing a plan or poster of their proposed aquaria, annotated to explain each component, and contributing to setting up this aquarium once agreed with the tutor. It would be sensible for learners to work in groups for this assessment to reduce the resources needed to set up individual aquaria.

For M2, learners could develop a monitoring sheet to use with their aquarium, and monitor the flora and fauna, water quality, temperature and health of the species within the aquarium over a period of time set by the tutor (for example one month). They will need to suggest potential improvements to increase welfare, after the set time period, in a written report. To achieve D2, learners could extend this by developing a feeding and healthcare plan for the aquaria or ornamental fish pond that takes into account relevant current legislation, health and safety and welfare of the species. Learners will use this plan over a period of time (once agreed with the tutor) and evaluate its effectiveness in a written report.

For P6 and P7, learners are required to plan and contribute to setting up a safe, viable ornamental pond; evidence could be similar to that given for P4 and P5.

For P8, P9 and P10, learners are required to maintain the health and welfare of the flora and fauna in a given aquarium over a set period of time as set by the tutor. Ideally, this should be a term, to allow learners to monitor all the changes happening in the aquarium and maintain them accordingly.

For M3, learners are required to monitor the flora, fauna, water quality, temperature, and health of fish in an ornamental fish pond over a period of time and make suggestions for improvements.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. 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
P1, P2, P3, M1, D1	The Aquatics Industry	You work in the aquatics department of a popular garden centre. You need to carry out market research on friends and family, as well as research on the internet/through magazines etc, to assess the market for fish keeping in the UK. You must investigate environmental issues and legislation related to care of ornamental aquatics.	Assignment.
P4, P5, P8, P9, P10, M2, D2	Aquaria	Learners are required to plan and contribute to setting up an aquarium, monitor the conditions and formulate health and feeding plans for that aquarium. They are also required to risk assess the aquaria for potential dangers	Poster. Practical assessment. Report.
P6, P7, M3, D2	Ornamental Fish Ponds	Learners are required to plan and contribute to setting up an ornamental pond, risk assessing it and monitoring it over a period of time.	Practical assessment. Written assignment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
Undertake Work Experience in the Land-based Industries	Understand the Principles of Aquatics Husbandry and Management
Maintain Animal Health and Welfare	
Understand the Basic Principles of Animal Biology	
Contribute to the Care of Exotic Animals	

Essential resources

Learners will need access to a range of fish ponds, aquaria, equipment, flora and fauna. They also need to be able to set up fish ponds and equipment, although this does not have to be individual and can be carried out in groups to reduce the amount of resources needed. Learners should have access to computers, the internet and a well-stocked library on fish and fish keeping.

Employer engagement and vocational contexts

The centre should forge links with local fish keepers, wholesalers and aquaria to enable learners to visit or engage with guest lecturers.

Learners can be introduced to a variety of professionals from different companies and organisations such as vets, RSPCA, animal care representatives, breeders etc to broaden their depth of knowledge and make the learning experience interesting and contextualised. This could be either guest lectures or off site visits to different establishments. All sites should be checked for health and safety before any visits.

Indicative reading for learners

Textbooks

Andrews C, Excell A and Carrington N – *The Interpet Manual of Fish Health* (Interpet Publishing, 2001)
ISBN 9781842860670

Axelrod H R, Benoit A S and Kelsey-Wood D T – *The Atlas of Garden Ponds* (TFH Publications, 1992)
ISBN 9780866223430

Howells G – *Water Quality for Freshwater Fish* (Taylor and Francis, 1993) ISBN 9782881249228

Moe M – *The Marine Aquarium Handbook: Beginner to Breeder* (Green Turtle Publications, 1992)
ISBN 9780939960071

Websites

Department of Environment, Farming and Rural Affairs www.defra.gov.uk

E Fish Business www.efishbusiness.co.uk

Environment Agency www.environment-agency.gov.uk

Ornamental Aquatic Trade Association www.ornamentalfish.org

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	describing the structure of the UK aquatics industry, and outlining and researching environmental issues associated with sourcing fish from the wild
Creative thinkers	planning and setting up an aquarium or ornamental fish pond, identifying risks and hazards, planning for feeding of species and maintaining the health of an aquarium
Reflective learners	describing the structure of the UK aquatics industry, and outlining and researching environmental issues associated with sourcing fish from the wild, identifying risks and hazards, planning for feeding of species and maintaining the health of an aquarium
Team workers	planning and setting up an aquarium or ornamental fish pond
Self-managers	describing the structure of the UK aquatics industry, and outlining and researching environmental issues associated with sourcing fish from the wild, identifying risks and hazards, maintaining the health of an aquarium
Effective participators	planning and setting up an aquarium or ornamental fish pond, identifying risks and hazards and maintaining the health of an aquarium.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out research activities related to aquaria and ornamental fish ponds analysing information on alternative ways of setting up and maintaining aquaria and ornamental fish ponds
Creative thinkers	asking questions to extend their thinking during lectures and practical sessions trying out alternatives or new ways of setting up aquaria and ornamental fish ponds adapting ideas as circumstances change eg new equipment, new nutritional information, new technology
Reflective learners	identifying opportunities for identifying their own achievements setting goals for themselves to achieve eg conquering a fear of handling an animal reviewing progress in practical tasks and coursework
Team workers	working with others to carry out practical tasks and group activities in class reaching clear agreements regarding who is carrying out which task working together when setting up or planning aquaria and ornamental ponds
Self-managers	showing initiative and commitment to fish and their needs dealing with pressures of an ill animal or unbalanced aquaria managing emotions when it comes to fish welfare and healthcare

Skill	When learners are ...
Effective participators	<p>discussing issues of concern when setting up or monitoring aquaria and ornamental ponds</p> <p>identifying improvements to current set ups</p> <p>influencing others in their health and monitoring regimes and standards.</p>

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	encouraging learners to complete their coursework using ICT facilities, using smartboards and PCs in class, using interactive materials for teaching and learning, researching subjects on the internet
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none">• text and tables• images• numbers• 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, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	using mathematics to suggest dosage of supplements per size of aquarium
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reading material on the subject from a variety of sources for their assignment work. Learners should be encouraged to read around subjects and produce clear and concise documents using correct fish health terminology for the unit
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	learners may also be required to present information to a group of people for the unit, and this should ideally be done in a classroom situation with their peers.
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	

Unit 16: Introduction to Caring for Horses

Unit code: H/600/9352

Level 2: BTEC First

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of horse care and stable management and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting, looking to progress into the sector or to further education and training.

● Introduction

This unit covers horse husbandry requirements and the associated practical skills. Learners will gain the confidence to develop basic skills in line with industry requirements and to suit individual horses.

Horses kept in a stable or fields need, food, water, shelter and well-maintained environments. In order to ensure this, certain tasks need to be performed on a regular basis. Those working with horses need to know when a horse demonstrates ill health, how to provide appropriate feed and water to keep horses healthy how to clothe horses appropriately and ensure they are ready to wear appropriate tack and equipment to make exercising safe and comfortable.

As well as basic yard skills learners will learn to recognise the signs of horse health, how they are monitored and routine husbandry treatments. The application, fitting, care and storage of tack and equipment will also be covered. Learners will develop an awareness of the correct condition for horses and how this relates to correct feeding principles.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to handle horses
- 2 Be able to carry out stable management routines
- 3 Be able to demonstrate care routines for horses
- 4 Know the feeding requirements of horses.

Unit content

1 Be able to handle horses

Lead and handle horses safely: use of appropriate equipment to handle horses safely eg headcollars, lead ropes, tying horses safely, safe leading technique eg from stable to stable, stable to fields, stable to exercise area; health and safety issues for horse and handler in above situations; use of personal protective equipment (PPE) for the situation and temperament of the horse eg gloves, hat, footwear; use of alternative equipment eg lunge cavasson, bridles, chifney, controller halters or similar

Equipment used fitted correctly: headcollars, snaffle bridle, reins, breast plates, martingales, general purpose (GP) saddle, girths, stirrups, leathers, numnahs lunge equipment (lunge cavasson, lunge line side reins); boots and bandages eg brushing, over reach, knee boots, exercise bandages; other methods of controlling horses eg chifney, controller halters or similar; clothing; outdoor and stable rugs eg turn out, stable, coolers, sweat rugs, rollers, surcingles; health and safety

Carry out cleaning of equipment and clothing: maintenance, care, cleaning, repair, storage, fitting of equipment used above; health and safety

2 Be able to carry out stable management routines

Mucking out: tools; methods (mucking out, banking up, day beds, skipping out, bedding down, muck disposal); materials (straw, shavings, paper, deep litter, matting); horse safety; muck heap maintenance; health and safety issues, PPE; environmental considerations eg disposal of waste

Yard duties: daily routine maintenance eg yard, feed and tack rooms, feed storage; yard responsibilities; safe and effective working practices; health and safety, PPE; environmental considerations

Maintain fields for field kept horses: carry out daily checks, weekly tasks, monthly and yearly activities (eg identification of poisonous plants and other hazards, fencing check, food/water check); health and safety

3 Be able to demonstrate care routines for horses

Health: checking signs of health (physical signs, behavioural signs); methods of monitoring eg observation, touch, temperature, pulse and respiration (TPR); body condition, foot and hoof care; checking for abnormalities; record keeping; health and safety: reporting any signs of ill health or abnormal behaviour

Grooming: purpose; grooming kit (contents, use and maintenance); tying up, grooming, strapping, quartering, grooming of the grass kept horse; health and safety and use of PPE

Bathing horses: identify situations when carried out; bath and dry a horse; health and safety, PPE

Pulling, plaiting and trimming horses: situations when carried out and when it is not appropriate (breed, use, environmental, health considerations); plaiting and trimming appropriate for individual horses and situations; pulling manes and tails, carried out as breed and purpose of horse requires; health and safety, PPE

4 Know the feeding requirements of horses

Nutrients: sources and function of water, carbohydrates, fats, protein, fibre, vitamins and minerals, importance of fibre to the diet, types eg grass, hay, soaked hay, ryegrass hay, haylage, silage; quality checking; recognition of hard feed eg cubes, mix, oats, barley, chaff, sugarbeet; quality

Feeding: rules of feeding; forage (concentrate ratios, basic rations); feeding regimes

Methods of feeding and watering: weighing out; safe storage of forages and hard feed; feeding methods eg hay nets, floor, rack, mangers, feed bowls, storage; correct preparation eg soaking, boiling, cooking; watering methods eg buckets, automatic watering systems, field troughs, hygiene and cleanliness of utensils and equipment used, health and safety considerations when feeding and watering; environmental considerations eg disposal of waste

Assessment and grading 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 for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 select and fit basic equipment required to handle and exercise horses	M1 report on the use of different equipment to handle and/or exercise horses in different situations	
P2 carry out cleaning of handling and exercise equipment		
P3 prepare and maintain accommodation for stable and field kept horses [TW]		
P4 maintain a yard environment to include feed room, tack room, stables, field, muck heap [IE, CT, EP]	M2 design a plan for daily, weekly and monthly routines for a specified yard including stable and grass kept horses	D1 report on how and why horse care routines in a specified yard can be improved.
P5 carry out of a full health check on a horse to include body and hoof condition [IE]	M3 report on health checks carried out on horses	
P6 groom a horse including one from trimming, pulling or plaiting [SM]		
P7 bathe and dry a horse		
P8 identify the dietary requirements of horses [IE]	M4 carry out feeding and watering of horses.	
P9 describe the methods available to feed and water horses in stables and fields. [IE]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Tutors delivering this unit have opportunities to use a wide range of techniques. Lectures, discussions, seminar presentations, site visits and practicals, research using library resources and the use of personal and/or industrial experience would all be suitable delivery methods. Delivery should stimulate, motivate, educate and enthuse learners.

Work placements should be monitored regularly to ensure the quality of the learning experience. Learners and supervisors should be aware of the requirements of this unit before any work related activities, so that naturally occurring evidence can be collected at the time. For example, learners may have the opportunity to observe horse behaviour indicating illness or injury, to follow bandaging procedures or to carry out grooming routines. Learners should be encouraged to ask for observations records and/or witness statements to be provided as evidence. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Tutors must stress the importance of ensuring horse welfare and the need to manage the resource using legal methods.

At all times the health and safety of both learners and horses should be paramount, and learners are not expected to deal with difficult or potentially dangerous horses or situations, beyond their capabilities and limited experience.

Tutors could integrate delivery, private study and assessment relating to this unit with any other relevant units and assessment instruments in learners' programmes of study.

Learners will develop the practical skills required to handle horses on the ground and care for both stable and field kept horses. This unit builds on and consolidates skills developed in similar units at level 1. Delivery should enable learners to demonstrate their practical skills to generate evidence of competency during routine care sessions.

Delivery techniques should be varied. Ideally, learners should have access to horses and/or high quality visual/audio-visual materials (for example video taken in the field, TV materials or colour slides). Learners should visit stables in order to see theory being applied in practice. Formal lectures, discussions and learner presentations would also form part of the delivery of this outcome. Learners can develop their knowledge and skills through work placements or by working in the centre's own horse care facilities.

Learning outcome 1 requires learners to show that they can handle horses during daily management duties safely. Routine care and the appropriate use of tack and horse clothing need to be demonstrated to a high standard for safety, welfare and economic reasons. Learners will also learn about and use PPE and have the opportunity to demonstrate awareness of health and safety considerations when handling horses in a variety of situations.

Learning outcome 2 covers the general care of the environment for stabled and field kept horses as well as general yard care, including health and safety aspects, welfare and aesthetics considerations. This could be delivered through a series of lectures, demonstrations and supervised practicals. Learners will learn about the variety of facilities and equipment used in good horse husbandry. This will enable them, through practising, to care for a horse and maintain good environmental conditions. Learners should be taught using current equipment and yard techniques. Visits to horse shows and trade exhibitions will enable learners to see new facilities that have been developed and discuss housing and equipment needs with suppliers.

Learning outcome 3 covers the signs of normal and abnormal health and behaviour in horses and also grooming. Horse health is integral to horse care and learners should be encouraged to develop a 'critical eye' in relation to the condition of both the horse and its environment. This can be carried out while learners

are grooming horses and encourages the development of husbandry skills of observation and feel while carrying out this daily task. Learners will also demonstrate how to pull, trim and plait horses appropriately as to their breed and/or discipline. Attendance during veterinary visits and/or to equine health facilities would help learners to generate information and evidence. The importance of good observation, understanding common problems and reporting any concerns to the supervisor must be emphasised, and encouraged when working on yards. Terminology associated with individual health situations should be that generally accepted on a national basis. Visits to shows, breeders and/or use of video to show different requirements for different disciplines will enhance learners' understanding.

Learning outcome 4 is likely to be delivered through formal lectures and the practical application of the dietary requirements of horses, the different constituents of foods and their role in diet. Analysis of current food packaging labels will make learners aware of the role of different nutrients, supplements and additives in foodstuffs. Access to the internet and/or relevant library materials would aid delivery and learners' ability to research the topics. Visits to feed mills or companies would be useful and visiting professional nutritionists could add relevance to the delivery of the unit.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of unit – including health and safety and PPE.
Assignment 1: Horse Husbandry and Stable Routines (P2, P3, P4, M1, D1)
Tutor introduces assessment.
Demonstrations and investigation of different routines appropriate to stable and field kept horses.
Yard duties including routine management tasks.
Mucking out.
Other duties including handling horses, use of equipment.
Assignment 2: Horse Handling, Grooming and Health Checks (P1, P5, P6, P7, M3)
Theory sessions handling and health check.
Handling and preparing a horse for exercise and taking to exercise area.
Theory and practical – trimming, plaiting, pulling* and bathing horses, breed and discipline requirements.
Horse health check and reporting.
Assignment 3: Feeding Horses (P8, P9, M4)
Theory session, feeding horses, identifying nutrients and sources, rations and methods of feeding.
Describe the nutrient requirements for horses and the methods of feeding and watering stable and field kept horses.
Assignment 4: Management Planning (M2)
Produce a plan for a yard with the daily, weekly and monthly tasks needed for stable and field kept horses.
Evidence of assessment of one from trimming, plaiting or pulling.

Assessment

To achieve a pass grade learners must achieve all four pass criteria listed on the assessment and grading grid provided.

To allow learners to carry out routine assessed practical yard duties work placements (appropriately evidenced) are likely to form the assessment for P1, P2, P3, P4, M1, M3 and D1. Learners should be appraised continuously on their performance and progress, and encouraged to achieve an industry efficient rate of work. If assessed by the tutor, suitable evidence from guided activities would be observation records completed by the learner and tutor. If assessed during a placement, witness statements should be provided by a suitable representative and verified by the tutor. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

For P1, learners will select and correctly tack up and untack a horse including a snaffle bridle, a GP saddle, brushing boots, turnout and stable rugs. Practical assessment (evidenced by observation records/witness statements) could be undertaken in a teaching yard environment and/or work placement.

For P2, P3 and P4, learners will carry out routine stable and yard duties competently and safely over a given period in a specified yard. This period will be at the centre's discretion, but should be for a reasonable period such as a term. The stables and equipment used must be of a type commonly found in the horse care industry and must meet the requirements of relevant legislation and codes of practice.

For P5, learners must identify signs of normal and abnormal health in horses. P6 and P7 require learners to bathe, dry and groom a minimum of two different horses. Practical assessment would be appropriate together with the preparation of factsheets, a poster or assignment relating to equine health. Evidence could be provided through an oral presentation, with the learner demonstrating grooming, foot and hoof care.

For P8, learners must identify the dietary requirements for a minimum of three different horses. Learners need to describe the different methods of feeding and watering stabled and field kept horses for P9. This could be evidenced through a report or poster linked to M2.

For a merit grade, learners must achieve all of the pass grade criteria and the four merit grade criteria.

For M1, learners must report on the use of handling and exercise equipment in different situations. Evidence could be a report, poster or recorded orally during working activities.

For M2, learners will design a plan showing management tasks required in a specified yard for stable and field kept horses covering daily, weekly and monthly tasks. Evidence could be a report, poster or presentation.

For M3, learners must report on the health checks carried out for P5. This could be in the form of a health record card.

M4 requires learners to carry out the feeding and watering of horses. Evidence could be by practical assessment (evidenced by observation records/witness statements) undertaken in a teaching yard environment and/or work placement and could be linked to P8.

For a distinction grade the learners must fulfil all of the pass and merit grade criteria and the three distinction grade criteria.

D1 requires learners to make recommendations for improvement to horse case routines in a specified yard. This could involve an assignment, presentation or report that highlighted each stable management task with suggested improvements for each and reasons for these.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. 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
P2, P3, P4, M1, D1	Horse Husbandry and Stable Routines	You work part time helping to run a horse yard and stables. You need to prepare and maintain horse accommodation during weekly/daily routines. You need to carry out tasks involved in the care of both stabled and field kept horses and demonstrate cleaning of handling and exercise equipment. You must report on the use of handling and exercising equipment in different scenarios and on how and why horse care routines might be improved.	Practical observation, assessment. Written evidence.
P1, P5, P6, P7, M3	Horse Handling, Grooming and Health Checks	You must carry out and report a full health check on one horse including body and hoof condition. You need to select equipment, tack up and untack a horse appropriately for exercise and take it to the exercise area. You will demonstrate your horse bathing and grooming skills including either trimming, plaiting or pulling.	Practical observation.
P8, P9, M4	Feeding Horses	You need to demonstrate correct feeding and watering of horses. You must identify the nutrients and describe different methods of providing horses with food and water.	Practical observation. Written/poster/leaflet.
M2	Management Planning	You have been asked to produce a simple maintenance plan for the yard with daily, weekly and monthly tasks needed for one stable and one field kept horse.	Written/poster/leaflet.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental and Land-based sector suite. This unit has particular links with the following.

Level 2	Level 3
Maintain Animal Health and Welfare	Plan and Monitor Animal Feeding
Understand the Basic Principles of Animal Biology	Manage Animal Accommodation
Participate in Providing Estate Maintenance	

Essential resources

Regular supervised access to a yard to carry out routine duties is essential, together with a suitable industry placement. Horses and ponies available for learners to use should be screened for suitability, to minimise health and safety risks and to allow learners to develop a foundation of competence and confidence, which can later be adapted to suit more demanding equines.

Equipment/consumables required include all those used routinely in a yard environment for stable management and health care duties.

Access to a laboratory may be appropriate for certain health care and nutritional topics and may enhance understanding of, for example, parasite control.

A range of horse clothing, boots, bandages and tack needs to be available and correct usage demonstrated. A range of hard feeds and forages should also be available.

Employer engagement and vocational contexts

This unit focuses on the practical aspects of horse care and will give learners the back ground knowledge and develop their skills to care for both stable- and grass-kept horses. These skills are essential for all employees within the horse industry to maintain the health and welfare of horses.

Centres are encouraged to develop links with employers within the horse industry to allow learners to experience different disciplines and knowledge of the associated horse care needs. This could be via visits, guest lectures and work experience placements.

Indicative reading for learners

Textbooks

Auty I (editor) – *The British Horse Society Complete Manual of Stable Management* (Kenilworth Press Ltd, 1998) ISBN 9781872119038

Cuddeford D – *Equine Nutrition* (The Crowood Press, 2003) ISBN 9781861265654

Hastie S – *The British Horse Society Veterinary Manual* (Kenilworth Press Ltd, 2001) ISBN 9781872082578

Houghton Brown J, Pilliner S and Powell-Smith V – *Horse and Stable Management* (Blackwell Scientific, 2003) ISBN 9781405100076

Journals

Horse and Hound

Your Horse

Websites

Blue Cross www.bluecross.org.uk

British Horse Society www.bhs.org.uk

Department for Environment, Food and Rural Affairs www.defra.gov.uk

Environment Agency www.environment-agency.gov.uk

LANTRA www.lantra.org.uk

Royal Society for the Prevention of Cruelty to Animals www.rspca.org.uk

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	producing written or verbal reports on horse health and management tasks
Creative thinkers	reporting on horse health and management tasks designing plans for routine tasks
Team workers	carrying out routine/practical duties
Self-managers	carrying out routine/practical duties
Effective participators	producing written or verbal reports on horse health and management tasks.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	researching horse health and management tasks
Creative thinkers	applying research to horse health and management tasks designing plans for routine tasks
Team workers	working in groups during routine/practical duties
Self-managers	managing own time to work within time constraints for practicals completing assessments.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	producing health record cards researching nutrition requirements, feeding and watering methods
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	saving work produced
Follow and understand the need for safety and security practices	using ICT
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
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 independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing health record cards producing reports on feeding and watering methods
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, responsibly and effectively including storage of messages and contact lists	
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	

Skill	When learners are ...
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reporting on health or other issues during routine duties
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading and summarising the requirements for trimming and plaiting of horses for various disciplines and breed specifications researching nutrition, feeding and watering methods
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	producing report/poster or leaflet on management plans producing a report on nutrition, feeding and watering methods.

Further information

For further information please call Customer Services on 020 7010 2173 (calls may be recorded for training purposes) or email: TeachingLandbasedStudies@pearson.com

Useful publications

Further copies of this document and related publications can be obtained by contacting us:

Telephone: 0845 172 0205

Related information and publications include:

- Functional Skills publications – specifications, tutor support materials and question papers
- the current Edexcel publications catalogue and update catalogue.

Pearson publications concerning the Quality Assurance System and the internal and external verification of vocationally related programmes can be found on the Pearson 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
CV8 2LG

Telephone: 0845 707 8007
Email: connect@lantra.co.uk

Professional development and training

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.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building Functional Skills into your programme
- building in effective and efficient quality assurance systems.

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 Pearson UK to discuss your training needs.

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 Pearson BTEC qualification framework for the environmental and land-based sector

Progression opportunities within the framework.

Level	General qualifications	BTEC full vocationally-related qualifications	BTEC Short Courses	NVQ/occupational
5		Pearson BTEC Level 5 Higher National Diplomas in: Animal Management, Environmental Conservation, Horse Management, Horticulture		
4		Pearson BTEC Level 4 Higher National Certificates in: Animal Management, Environmental Conservation, Horse Management, Horticulture		
3	Edexcel Level 3 Diploma in Environmental and Land-based Studies	Pearson BTEC Level 3 Certificates, Subsidiary Diplomas, Diploma and Extended Diplomas in Animal Care, Animal Management, Blacksmithing and Metalworking, Countryside Management, Fish Management, Floristry, Forestry and Arboriculture, Horse Management, Horticulture, Land-based Technology		NVQ in Environmental Conservation
2	Edexcel Level 2 Diploma in Environmental and Land-based Studies	Pearson BTEC Level 2 Certificate, Extended Certificate and Diploma in Agriculture, Animal Care, Blacksmithing and Metalworking, Countryside and Environment, Fish Husbandry, Floristry, Horse Care, Horticulture, Land-based Technology		NVQ in Environmental Conservation
1	Edexcel Level 1 Diploma in Environmental and Land-based Studies	BTEC Foundation Learning in Land-based Studies		
Entry		BTEC Foundation Learning in Land-based Studies		

Annexe B

Grading domains: BTEC Level 2 generic grading domains

Grading domain 1	Indicative characteristics – merit	Indicative characteristics – distinction
Application of knowledge and understanding (Learning outcome stem <i>understand or know</i>)	<ul style="list-style-type: none"> • Show depth of knowledge and development of understanding in given situations (for example explain why, make judgements based on analysis). • Apply and/or select relevant concepts. • Apply knowledge to different contexts. • Apply knowledge to non-routine contexts (ie assessor selection). • Make comparisons. • Show relationships between pass criteria. 	<ul style="list-style-type: none"> • Synthesise knowledge and understanding across pass/merit criteria. • Evaluate concepts/ideas/actions. • Analyse/research and make recommendations. • Judges implications of application of knowledge/understanding. • Applies knowledge and understanding to complex activities/context.
Grading domain 2	Indicative characteristics – merit	Indicative characteristics – distinction
Development of practical and technical skills (Learning outcome stem <i>be able to</i>)	<ul style="list-style-type: none"> • Use advanced techniques/processes/skills successfully. • Act under limited supervision/demonstrate independence (note: pass cannot require support). • Apply to non-routine activities. • Demonstrate within time and/or resource constraints. • Produce varied solutions (including non-routine). • Modify techniques/processes to situations. 	<ul style="list-style-type: none"> • Demonstrate creativity/originality/own ideas. • Apply skill(s) to achieve higher order outcome. • Select and use successfully from a range of advanced techniques/processes/skills. • Reflects on skill acquisition and application. • Justifies application of skills/methods. • Makes judgements about risks and limitations of techniques/processes. • Innovates or generates of application of techniques/processes for new situations.

Grading domain 3	Indicative characteristics – merit	Indicative characteristics – distinction
Personal development for occupational roles (Any learning outcome stem)	<ul style="list-style-type: none"> • Takes responsibility in planning and undertaking activities. • Reviews own development needs. • Finds and uses relevant information sources. • Acts within a given work-related context showing understanding of responsibilities. • Identifies responsibilities of employers to the community and the environment. • Applies qualities related to the vocational sector. • Internalises skills/attributes (creating confidence). 	<ul style="list-style-type: none"> • Manages self to achieve outcomes successfully. • Plans for own learning and development through the activities. • Analyses and manipulates information to draw conclusions. • Applies initiative appropriately. • Assesses how different work-related contexts or constraints would change performance. • Takes decisions related to work contexts. • Applies divergent and lateral thinking in work-related contexts. • Understands interdependence.
Grading domain 4	Indicative characteristics – merit	Indicative characteristics – distinction
Application of generic skills (Any learning outcome stem)	<ul style="list-style-type: none"> • Communicates using appropriate technical/professional language. • Makes judgements in contexts with explanations. • Explains how to contribute within a team. • Makes adjustments to meet the needs/expectations of others (negotiation skills). • Select and justify solutions for specified problems. 	<ul style="list-style-type: none"> • Presents self and communicates information to meet the needs of a typical audience. • Takes decisions in contexts with justifications. • Produces outputs subject to time/resource constraints. • Reflects on own contribution to working within a team. • Generate new or alternative solutions to specified problems.

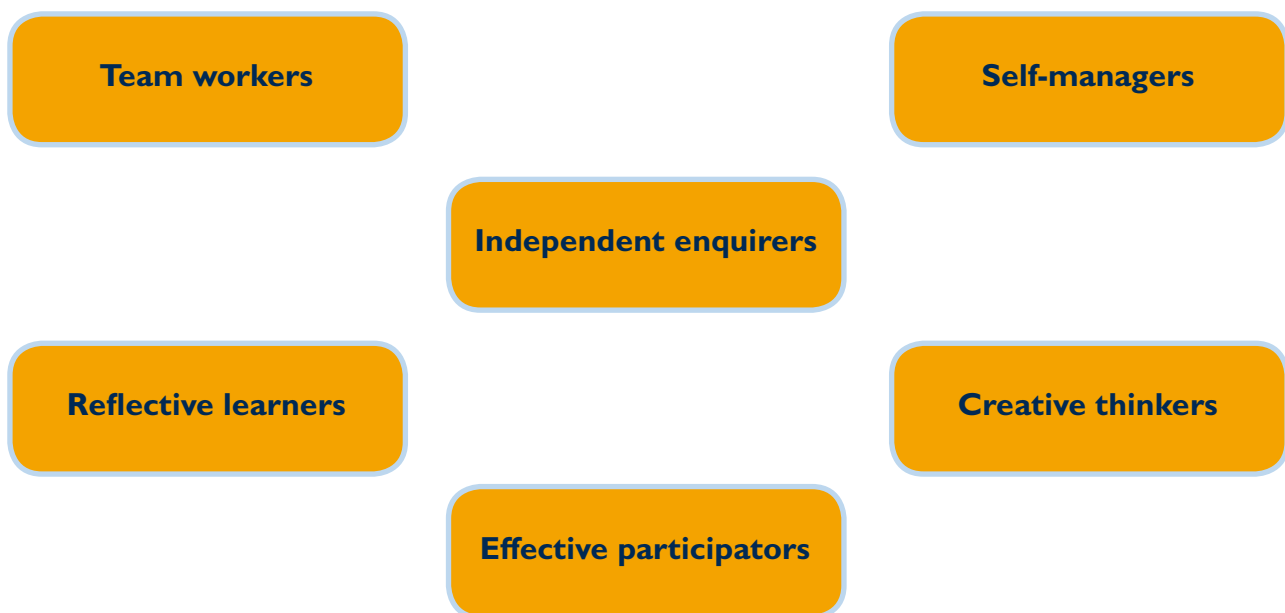
Annexe C

Personal, learning and thinking skills

A FRAMEWORK OF PERSONAL, LEARNING AND THINKING SKILLS 11-19 IN ENGLAND

The framework comprises six groups of skills that, together with the Functional Skills of English, mathematics and ICT, are essential to success in learning, life and work. In essence the framework captures the essential skills of: managing self; managing relationships with others; and managing own learning, performance and work. It is these skills that will enable young people to enter work and adult life confident and capable.

The titles of the six groups of skills are set out below.



For each group there is a focus statement that sums up the range of skills. This is followed by a set of outcome statements that are indicative of the skills, behaviours and personal qualities associated with each group.

Each group is distinctive and coherent. The groups are also inter-connected. Young people are likely to encounter skills from several groups in any one learning experience. For example an independent enquirer would set goals for their research with clear success criteria (reflective learner) and organise and manage their time and resources effectively to achieve these (self-manager). In order to acquire and develop fundamental concepts such as organising oneself, managing change, taking responsibility and perseverance, learners will need to apply skills from all six groups in a wide range of learning contexts 11-19.

The Skills

Independent enquirers

Focus:

Young people process and evaluate information in their investigations, planning what to do and how to go about it. They take informed and well-reasoned decisions, recognising that others have different beliefs and attitudes.

Young people:

- identify questions to answer and problems to resolve
- plan and carry out research, appreciating the consequences of decisions
- explore issues, events or problems from different perspectives
- analyse and evaluate information, judging its relevance and value
- consider the influence of circumstances, beliefs and feelings on decisions and events
- support conclusions, using reasoned arguments and evidence.

Creative thinkers

Focus:

Young people think creatively by generating and exploring ideas, making original connections. They try different ways to tackle a problem, working with others to find imaginative solutions and outcomes that are of value.

Young people:

- generate ideas and explore possibilities
- ask questions to extend their thinking
- connect their own and others' ideas and experiences in inventive ways
- question their own and others' assumptions
- try out alternatives or new solutions and follow ideas through
- adapt ideas as circumstances change.

Reflective learners

Focus:

Young people evaluate their strengths and limitations, setting themselves realistic goals with criteria for success. They monitor their own performance and progress, inviting feedback from others and making changes to further their learning.

Young people:

- assess themselves and others, identifying opportunities and achievements
- set goals with success criteria for their development and work
- review progress, acting on the outcomes
- invite feedback and deal positively with praise, setbacks and criticism
- evaluate experiences and learning to inform future progress
- communicate their learning in relevant ways for different audiences.

Team workers

Focus:

Young people work confidently with others, adapting to different contexts and taking responsibility for their own part. They listen to and take account of different views. They form collaborative relationships, resolving issues to reach agreed outcomes.

Young people:

- collaborate with others to work towards common goals
- reach agreements, managing discussions to achieve results
- adapt behaviour to suit different roles and situations, including leadership role
- show fairness and consideration to others
- take responsibility, showing confidence in themselves and their contribution
- provide constructive support and feedback to others.

Self-managers

Focus:

Young people organise themselves, showing personal responsibility, initiative, creativity and enterprise with a commitment to learning and self-improvement. They actively embrace change, responding positively to new priorities, coping with challenges and looking for opportunities.

Young people:

- seek out challenges or new responsibilities and show flexibility when priorities change
- work towards goals, showing initiative, commitment and perseverance
- organise time and resources, prioritising actions
- anticipate, take and manage risks
- deal with competing pressures, including personal and work-related demands
- respond positively to change, seeking advice and support when needed
- manage their emotions, and build and maintain relationships.

Effective participators

Focus:

Young people actively engage with issues that affect them and those around them. They play a full part in the life of their school, college, workplace or wider community by taking responsible action to bring improvements for others as well as themselves.

Young people:

- discuss issues of concern, seeking resolution where needed
- present a persuasive case for action
- propose practical ways forward, breaking these down into manageable steps
- identify improvements that would benefit others as well as themselves
- try to influence others, negotiating and balancing diverse views to reach workable solutions
- act as an advocate for views and beliefs that may differ from their own.

PLTS performance indicator (suggested recording sheet)

Name:	Date:				
	Level of success 1 = low, 5 = high				
Independent enquirers					
Identify questions to answer and problems to resolve	1	2	3	4	5
Plan and carry out research, appreciating the consequences of decisions	1	2	3	4	5
Explore issues, events or problems from different perspectives	1	2	3	4	5
Analyse and evaluate information, judging its relevance and value	1	2	3	4	5
Consider the influence of circumstances, beliefs and feelings on decisions and events	1	2	3	4	5
Support conclusions, using reasoned arguments and evidence	1	2	3	4	5
Creative thinkers					
Generate ideas and explore possibilities	1	2	3	4	5
Ask questions to extend their thinking	1	2	3	4	5
Connect their own and others' ideas and experiences in inventive ways	1	2	3	4	5
Question their own and others' assumptions	1	2	3	4	5
Try out alternatives or new solutions and follow ideas through	1	2	3	4	5
Adapt ideas as circumstances change	1	2	3	4	5
Reflective learners					
Assess themselves and others, identifying opportunities and achievements	1	2	3	4	5
Set goals with success criteria for their development and work	1	2	3	4	5
Review progress, acting on the outcomes	1	2	3	4	5
Invite feedback and deal positively with praise, setbacks and criticism	1	2	3	4	5
Evaluate experiences and learning to inform future progress	1	2	3	4	5
Communicate their learning in relevant ways for different audiences	1	2	3	4	5

Team workers					
Collaborate with others to work towards common goals	1	2	3	4	5
Reach agreements, managing discussions to achieve results	1	2	3	4	5
Adapt behaviour to suit different roles and situations, including leadership roles	1	2	3	4	5
Show fairness and consideration to others	1	2	3	4	5
Take responsibility, showing confidence in themselves and their contribution	1	2	3	4	5
Provide constructive support and feedback to others	1	2	3	4	5
Self-managers					
Seek out challenges or new responsibilities and show flexibility when priorities change	1	2	3	4	5
Work towards goals, showing initiative, commitment and perseverance	1	2	3	4	5
Organise time and resources, prioritising actions	1	2	3	4	5
Anticipate, take and manage risks	1	2	3	4	5
Deal with competing pressures, including personal and work-related demands	1	2	3	4	5
Respond positively to change, seeking advice and support when needed	1	2	3	4	5
Manage their emotions, and build and maintain relationships.	1	2	3	4	5
Effective participators					
Discuss issues of concern, seeking resolution where needed	1	2	3	4	5
Present a persuasive case for action	1	2	3	4	5
Propose practical ways forward, breaking these down into manageable steps	1	2	3	4	5
Identify improvements that would benefit others as well as themselves	1	2	3	4	5
Try to influence others, negotiating and balancing diverse views to reach workable solutions	1	2	3	4	5
Act as an advocate for views and beliefs that may differ from their own	1	2	3	4	5

Note to learner: The circled number represents an indication of your PLTS performance so far.

Note to tutor: Indicate the level of success by circling the appropriate number during your feedback with the learner.

Summary of the PLTS coverage throughout the programme

Personal, learning and thinking skills	Unit							
	1	2	3	4	5	6	7	8
Independent enquirers	✓	✓	✓	✓	✓	✓	✓	✓
Creative thinkers	✓	✓	✓	✓	✓	✓		✓
Reflective learners	✓	✓	✓	✓				✓
Team workers		✓	✓	✓		✓	✓	✓
Self-managers	✓	✓	✓	✓	✓			✓
Effective participators		✓	✓	✓		✓	✓	✓
✓ – opportunities for development								

Personal, learning and thinking skills	Unit							
	9	10	11	12	13	14	15	16
Independent enquirers	✓	✓	✓	✓	✓	✓	✓	✓
Creative thinkers		✓		✓	✓	✓	✓	✓
Reflective learners		✓		✓	✓	✓	✓	
Team workers	✓	✓		✓	✓	✓	✓	✓
Self-managers	✓	✓		✓	✓	✓	✓	
Effective participators				✓	✓	✓	✓	✓
✓ – opportunities for development								

Annexe D

Wider curriculum mapping

Study of the Pearson BTEC Level 2 Firsts in Animal Care 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.

The Pearson BTEC Level 2 Firsts in Animal Care makes a positive contribution to wider curricular areas as appropriate.

Spiritual, moral, ethical, social and cultural issues

The qualification contributes to an understanding of:

- spiritual issues – for example moral and ethical issues involved in the care and appreciation of animals as part of the natural world
- social and cultural issues – for example issues around animal welfare and uses.

Citizenship issues

Learners undertaking the Pearson BTEC Level 2 Firsts in Animal Care will have the opportunity to develop their understanding of citizenship issues, for example public and private involvement in animal roles and welfare.

Environmental issues

Learners undertaking the Pearson BTEC Level 2 Firsts in Animal Care will have the opportunity to develop their understanding of environmental issues throughout the units.

European developments

Much of the content of the Pearson BTEC Level 2 Firsts in Animal Care applies throughout Europe even though delivery is in a UK context.

Health and safety considerations

The Pearson BTEC Level 2 Firsts in Animal Care are practically based and health and safety issues are encountered throughout the units.

Equal opportunities issues

Equal opportunities issues are implicit throughout the Pearson BTEC Level 2 Firsts in Animal Care.

Wider curriculum mapping

Level 2

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Spiritual							✓
Moral and ethical	✓			✓		✓	
Social and cultural	✓				✓		
Citizenship issues	✓				✓		
Environmental issues	✓	✓	✓	✓		✓	✓
European developments	✓				✓		
Health and safety considerations	✓	✓	✓	✓	✓	✓	✓
Equal opportunities issues	✓				✓		

	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14
Spiritual							
Moral and ethical		✓		✓			
Social and cultural			✓		✓		
Citizenship issues			✓		✓		
Environmental issues	✓	✓		✓	✓	✓	✓
European developments		✓	✓				
Health and safety considerations	✓	✓	✓	✓	✓	✓	✓
Equal opportunities issues			✓				

Annexe E

National Occupational Standards/mapping with NVQs

The grid below maps the knowledge covered in the Pearson BTEC Level 2 Certificate, Extended Certificate and Diploma in Animal Care against the underpinning knowledge of the Level 2 NVQ in Animal Care, Level 2 NVQ in Environmental Conservation and Level 2 NVQ in Livestock Production.

KEY

- ✓ indicates that the Pearson BTEC Level 2 Firsts cover all of the underpinning knowledge of the NVQ unit
- # indicates partial coverage of the NVQ unit
- a blank space indicates no coverage of the underpinning knowledge

NVQs	Units															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 2 NVQ in Animal Care																
AC8.1,2												#				
AC9.1,2											#					
AC28.1												#				
Level 2 NVQ in Livestock Production																
LP25.1							#									
LP48.1							#									
Level 2 NVQ in Environmental Conservation																
EC2.1,2									#							
CU19.1,2								#								
CU32.1				#												
CU32.2						#										
CU33.1,2			#													
CU34.1				#												

NVQs	Units															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CU37.1,2		#														
CU45.1						#										
CU87.1,2									#							

Annexe F

Unit mapping overview

BTEC First in Animal Care legacy (specification end date 31/08/2010)/new versions of the BTEC First qualifications in Animal Care (specification start date 01/09/2010) – the BTEC Level 2 Certificate in Animal Care, BTEC Level 2 Extended Certificate in Animal Care and the BTEC Level 2 Diploma in Animal Care.

Old units \ New units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
Unit 1	F									
Unit 2			P							
Unit 3			P							
Unit 4			P				P			
Unit 5		P								
Unit 6			P				P			
Unit 7				F						
Unit 8					F					
Unit 9						F				
Unit 10								F		
Unit 11									P	
Unit 12										F
Unit 13										
Unit 14										

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))

New units \ Old units				
	Unit 11	Unit 12	Unit 13	Unit 14
Unit 13	F			
Unit 14		F		
Unit 15			F	
Unit 16				F

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))

Unit mapping in depth

BTEC First in Animal Care legacy (specification end date 31/08/2010)/new versions of the BTEC First qualifications in Animal Care (specification start date 01/09/2010) – the BTEC Level 2 Certificate in Animal Care, BTEC Level 2 Extended Certificate in Animal Care and the BTEC Level 2 Diploma in Animal Care.

New units		Old units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
Unit 1	Work Related Experience in the Land-based Industries	1	Work Related Experience in Animal Care	Minimum work related experienced increased from 120 hours to 150 hours. Purpose and structure of a business replaced by job roles. <i>Plan and review work.</i>
Unit 2	Maintain Animal Accommodation	3	Animal Accommodation, Handling and Care	Handling, nutrition and behaviour moved to new Unit. Focus on knowledge of preparation and maintenance requirements.
Unit 3	Undertake Practical Animal Feeding	3	Animal Accommodation, Handling and Care	Nutrition and feeding moved to new Unit. Focus on animal monitoring and record keeping.
Unit 4	Maintain Animal Health and Welfare	3 & 7	Animal Accommodation, Handling and Care & Animal Health, Welfare and Behaviour	Focus on practical promotion and monitoring of animal health.
Unit 5	Environmental and Land-based Business	2	Animal Care Industry and Organisations	Focus on sustainable development removed. <i>Practical admin skills and business operations.</i>
Unit 6		3 & 7	Animal Accommodation, Handling and Care & Animal Health, Welfare and Behaviour	Less emphasis on pet owner responsibilities.
Unit 7	Understand the Basic Principles of Animal Biology	4	Introduction and Animal and Plant Biology	Purely animal related.
Unit 8	Participate in Providing Estate Maintenance	5	Practical Land-based Skills	N/A
Unit 9	Conservation and Improvement of British Habitats	6	Conservation and Improvement of British Habitats	N/A
Unit 10	Presentation and Service for Retailing in the Land-based Sector	8	Land-based Retail and Customer Service	<i>Practical retail outlet design.</i>
Unit 11	Introduction to Animal Breeds and Grooming	9	Animal Breeds and Grooming	History of animal breed development.

New units		Old units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
Unit 12	Understand the Principles and Practices of Animal Establishments	10	Animal Establishments	Practical husbandry and cleaning.
Unit 13	Contribute to the Care of Exotic Animals	11	Care of Exotic Animals	Sourcing aquatic species.
Unit 14	Contribute to the Nursing of Animals	12	Animal Nursing	N/A
Unit 15	Introduction to Caring for Ornamental Aquatics	13	Handling and Care of Ornamental Aquatics	N/A
Unit 16	Introduction to Caring for Horses	14	Introduction to Horse Care	N/A

Annexe G

Examples of calculation of qualification grade above pass grade

Edexcel will automatically calculate the qualification grade for your learners when your learner unit grades are submitted.

The generic examples below demonstrate how the qualification grade above pass is calculated using the following two tables which are also shown in the section earlier on in the specification *Calculation of the qualification grades above pass grade*.

Points available for credits achieved at different levels and unit grades

The table below shows the **number of points scored per credit** at the unit level and grade.

Unit level	Points per credit		
	Pass	Merit	Distinction
Level 1	3	4	5
Level 2	5	6	7
Level 3	7	8	9

Learners who achieve the correct number of points within the ranges shown in the 'qualification grade' table below will achieve the qualification merit or distinction or distinction* grade.

Qualification	Points range above pass grade		
	Merit	Distinction	Distinction*
BTEC Level 2 Certificate	85–94	95–99	100 and above
BTEC Level 2 Extended Certificate	170–189	190–199	200 and above
BTEC Level 2 Diploma	340–379	380–399	400 and above

Example 1

Achievement of pass qualification grade

A learner completing a 15-credit Pearson BTEC Level 2 Certificate achieves the credit required to gain a pass qualification grade and does not achieve the points to gain a merit grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Unit 1	2	5	Pass	5	$5 \times 5 = 25$
Unit 2	2	5	Pass	5	$5 \times 5 = 25$
Unit 3	2	5	Merit	6	$5 \times 6 = 30$
Qualification grade totals		15	Pass		80

Example 2

Achievement of merit qualification grade

A learner completing a 15-credit Pearson BTEC Level 2 Certificate achieves the points required to gain a merit qualification grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Unit 1	2	5	Pass	5	$5 \times 5 = 25$
Unit 2	2	5	Merit	6	$5 \times 6 = 30$
Unit 3	2	5	Merit	6	$5 \times 6 = 30$
Qualification grade totals		15	Merit		85

Example 3

Achievement of distinction qualification grade

A learner completing a 15-credit Pearson BTEC Level 2 Certificate achieves the points required to gain a distinction qualification grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Unit 1	2	5	Merit	6	$5 \times 6 = 30$
Unit 2	2	5	Merit	6	$5 \times 6 = 30$
Unit 3	2	5	Distinction	7	$5 \times 7 = 35$
Qualification grade totals		15	Distinction		95

Example 4

Achievement of merit qualification grade

A learner completing a 30-credit Pearson BTEC Level 2 Extended Certificate achieves the points required to gain a merit qualification grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Unit 1	2	5	Merit	6	$5 \times 6 = 30$
Unit 2	2	5	Pass	5	$5 \times 5 = 25$
Unit 3	2	5	Distinction	7	$5 \times 7 = 35$
Unit 6	2	10	Pass	5	$10 \times 5 = 50$
Unit 8	3	5	Pass	7	$5 \times 7 = 35$
Qualification grade totals		30	Merit		175

Example 5

Achievement of merit qualification grade

A learner completing a 60-credit Pearson BTEC Level 2 Diploma achieves the points required to gain a merit qualification grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Unit 1	2	5	Merit	6	$5 \times 6 = 30$
Unit 2	2	5	Pass	5	$5 \times 5 = 25$
Unit 3	2	5	Distinction	7	$5 \times 7 = 35$
Unit 6	2	10	Merit	6	$10 \times 6 = 60$
Unit 9	1	5	Merit	4	$5 \times 4 = 20$
Unit 10	2	10	Distinction	7	$10 \times 7 = 70$
Unit 11	2	10	Merit	6	$10 \times 6 = 60$
Unit 14	2	10	Merit	6	$10 \times 6 = 60$
Qualification grade totals		60	Merit		360

June 2016

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