

Level One

Edexcel Diploma in Environmental and Land-based Studies

Sample Assessment Materials

Unit 4

Working with Plants and Animals

INTRODUCTION

This Sample Assessment Material is intended to provide centres with advice and guidance on the setting and assessment of learner assignments for the above mentioned Diploma unit. It is structured as follows:

1. Advice to tutors
2. 'How you will be assessed'
3. Example of a learner assignment brief
4. Marking grid
5. Evidence structure

Further advice on the delivery and assessment of the Edexcel Diploma is provided in the Unit Specifications and Tutor Support Materials.

Sector relevant purpose

The sector-relevant purpose for the assignment is to show that learners are able to grow plants and care for animals to meet specified objectives. This could be achieved by linking the assignment to learners' work experience placements or to visits to sites where learners can work with plants and animals.

The ability to grow plants and care for animals is essential to many land-based organisations, jobs and to those working in the sector. These skills can be applied to a variety of situations, business or other (for example voluntary or charitable), to meet specific objectives.

Tutors have the opportunity to identify a range of species of plants and animals that their learners can study and care for.

A simulated business or other situation can be used if a real situation is not available.

1 ADVICE TO TUTORS

The requirements for the assessment of Diploma internally-assessed units (task briefs) are set down in the respective units, and tutors are advised to familiarise themselves with these. A copy of the assessment requirements for this unit is reproduced in section 2, below.

Experiential learning

The use of experiential learning techniques is fundamental to the concept of the Diploma, and tutors should maximise the use of 'do, review, re-do' opportunities when learners are working through their assignments. Learners will benefit from regular and structured feedback, and this is a fundamental requirement of a Diploma programme.

Personal learning and thinking skills

In addition to the specific requirements of the task brief, the tutor should ensure that opportunities are not missed for the development and enhancement of Personal Learning and Thinking Skills (PLTS), which underpin the Diploma concept.

Learner assignments for internal assessment should be treated as a vehicle through which these important generic skills can be delivered and reinforced, and in a context that is relevant both to the sector and to learner level.

Functional skills

The performance of the assessment task should also be treated as a vehicle through which Functional skills can be evaluated and reinforced, in a context that is relevant both to the sector and to the learner. The use of formative assessment techniques and mentoring aid learner development in these important skill areas is strongly encouraged.

The assignment brief

The centre will need to provide learners access to appropriate plants, animals and related facilities. Appropriate levels of learner supervision will also be required for all practical activities. It is suggested that learners will require approximately 15 guided learning hours to produce the necessary evidence for this unit.

The assignment can be designed in relation to any context contained in the Lantra Sector Skills Council footprint. Tutors must agree the specified objectives with each learner before any assessment work is undertaken. A simulated business or other (for example voluntary or charitable) environment can be used if a real situation is not available.

Centres must ensure that animal welfare and health and safety are not compromised at any time.

Learners should work individually with plants but they must work in pairs or more with animals.

The plans relating to work with plants and animals should be agreed by the tutor before any learner starts to work with the plants and animals. They should be drawn up individually, but those for working with animals must be agreed and understood by all team members before starting work.

2 'HOW YOU WILL BE ASSESSED'

The assignment is based upon you working with plants and animals to meet specified objectives.

You need to propagate and grow on one species of plant from seed and one species of plant from a cutting and care for two species of animal.

You must:

1. list wild and cultivated plants and wild and domesticated animals
2. plan and carry out plant and animal care including soil testing and safe tool and equipment use, to meet specified objectives
3. report on their basic needs, on-going health and the environmental conditions they need to grow and breed
4. review the plant and animal care you carried out and make recommendations for improving the work processes you have used.

Assessment

The evidence requirements are shown in the marking grids. These will be used by your tutor when marking your completed work. Your tutor will decide which mark band should be applied to your work for each area of assessment focus. This will be on the principle of best fit and, for example, work may be classified as mark band 2 despite aspects of the work falling into mark band 1 and other areas of the work falling into mark band 3.

To improve your marks and move across the mark bands from band 1 to band 3 your work will have to generally increase in depth and complexity with more description, reasoning and justification as you move across the mark bands.

3 EXAMPLE OF A LEARNER ASSIGNMENT BRIEF

Environmental and Land-based Studies Diploma Principal Learning

Level 1: Unit 4 - Working with Plants and Animals

Assignment title :

Advice to learners

When producing work for this unit you should:

- plan your work and agree appropriate timescales with your tutor
- give periodic updates on your progress to him/her
- demonstrate commitment, initiative and teamwork during your work.

Your tutor will identify and agree with you the plants and animals and the specified objectives that you will work with.

You will be required to work individually when you are working with plants but in teams of two or more when working with animals. All other parts of the assessment must be produced individually.

Your tutor will divide the class into groups to undertake the working with animals element of the assignment.

You will be required to present your report in a format that could be given to staff from the Farm and from the Diploma consortium.

Animal welfare and health and safety considerations must be covered by your tutor with you before you start any practical work. This MUST include risk assessment for all types of work and the provision of appropriate personal protective equipment (PPE).

Introduction

The ability to grow plants and care for animals is essential to many land-based organisations, jobs and to those working in the sector. These skills can be applied to a variety of situations, business or other (for example voluntary or charitable), to meet specific objectives.

This assignment is the end point of the work we have been doing for this unit.

We have already had staff from Dora's Farm visit us to talk about their work, the objectives for the farm and the methods they use.

This assignment will require us to visit the farm on a number of occasions and to work with plants and animals there, finally drawing appropriate recommendations for ways of improving the way that the work was carried out.

As you know this is a real situation. It is essential that you do nothing that will endanger others, the animals on the farm or anything that could affect the farm's business.

Scenario

Dora's Farm is a small free range organic pork, poultry and crop producer that specialises in high welfare standards. It has a mixture of outdoor and indoor production units.



The business sells pork, poultry and crops locally and to domestic customers around the UK using a web-based sales outlet.

It has expanded recently and is now introducing rare breed pigs to its line of products.

The business needs you to assist in the care of some new rare breed pig and poultry stock and also assist in the growth of some new organic crop lines.

This will require you to help

- maintain and care for the animals and ensure their health and welfare; and
- grow crops efficiently.

These activities must be carried out in line with the business's animal welfare and production timeline commitments to ensure their reputation for reliability and quality on which their sales depend.

In order to achieve this you will complete three different activities. All of these need to be completed and are explained in the following sections.

Activity 1 - Plants

In order to do any work of this type you should have an appropriate plan of action. This must include the resources that you will need and a timeline for when the activities should take place.

Your plan should include relevant:

- **Protection required for the plants** such as a glasshouse, cloche
- **Tools** such as hoe, dibber, spade, sieve, trowel, secateurs and calendar
- **Equipment** such as seed trays, pots, canes, thermometer, soil testing equipment and personal protective equipment
- **Materials** such as seeds, growing media, rooting hormone, fertilisers and plant feeds.

When you visit the farm for our practical days you must check that you have access to the tools, equipment and materials that you need to work with plants.

Establishing organic seedlings and cuttings

In order to work properly with plants it is essential that you can identify the plants that you are trying to grow from others that may be on the site. You don't want to remove the plants that you are trying to grow thinking they are weed species.

You have been asked to grow 50 geraniums from cuttings and 50 lettuces from seed.

Your first activity is to identify a range of common cultivated and wild plants found on the farm so you can tell the differences between the species you are growing and the other common plants to be found in the locality.

You should use simple identification keys to do this work.

You must identify :

- 5 common **cultivated** plants found at the farm
- 5 common **wild** plants found at the farm.

You should **NOT** pick and press these flowers. Annotated drawings or photographs should be produced.

Having done this then you should establish the plant seeds and establish cuttings in appropriate conditions and in the appropriate place.

Activity 1 - Plants continued

Growing on established plants

Between our visits the farm's staff will keep an eye on your plants. However you must show that you can demonstrate skills that relate to appropriate plant growth and care.

This must include:

- soil testing and identification
- watering
- feeding
- providing correct environmental conditions including temperature, humidity, light, space, ventilation and protection
- health management, including the identification of signs of health and ill-health in your plants and the completion of appropriate records
- mulching where appropriate
- safe use of appropriate tools, machinery, materials and equipment.

In order to produce this evidence you will be required to answer the following questions which all relate to what plants need in order to grow to a size and quality that the farm can sell:

- Explain why your plants need water, food and protection
- Explain why your plants need correct environmental conditions
- Describe the **water, food, and protection** needs of the plants you have worked with
- Describe the **environment conditions** needed to breed and grow the plants you have worked with
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Activity 2 - Animals

Your second activity is to care for two species of animal.

Dora's Farm has pigs and poultry so you will be asked to care for groups of these. The farm will identify the animals and objectives for you on our next visit, but the bottom line is you will have to ensure that they are maintained and cared for appropriately to meet the farm's standards.

Just as with the plants in order to do any work of this type you need an appropriate plan of action. This must also include the resources that you will need and a timeline for when the activities should take place.

When you visit the farm for our practical days you must check that you have access to the tools, equipment and materials that you need to work with your animals.

Your plan should include relevant:

- **Housing** such as pig shelters, chicken houses, pens, fences
- **Tools** such as buckets, calendar
- **Equipment** such as feeders, water trough/drinker, personal protective equipment and heating equipment
- **Materials** such as cleaning materials, straw, poultry and pig feed.

In order to work properly with animals it is essential that you can identify them from others that may be on the site. Legislation covers many aspects of the life of the farmer and it is therefore essential that he/she can identify the different animals that they may come into contact with on a daily basis, for example, those that may be pests or predators to the stock that is being reared.

You should use simple identification keys to do this work.

You must identify :

- 5 species or breeds of **domesticated animals** found at the farm
- 5 common species of **wild animals** found at the farm.

Annotated drawings or photographs should be produced.

Activity 2 - Animals continued

Between our visits the farm's staff will keep an eye on your animals. However you must show that you can demonstrate skills that relate to appropriate animal care and welfare.

Care for your chosen animals

This must include:

- watering
- feeding
- handling
- correct environmental conditions for example shade, space, wallows, shelters, enrichment and grouping
- health management, including the identification of signs of health and ill-health in your animals and the completion of appropriate records
- safe use of appropriate tools, machinery, materials and equipment.

In order to produce this evidence you will be required to answer the following questions which all relate to what animals need in order to grow to a size and quality that the farm can sell:

- Explain why your animals need water, food and housing
- Explain why your animals need correct environmental conditions
- Describe the **water, food, handling and housing** needs of the animals you have worked with
- Describe the **environment conditions** needed to breed and grow the animals you have worked with.

Activity 3 - Review

Your third activity is to review the plant and animal care that you carried out and make appropriate recommendations for the future.

Stage 1

Review the plant care

You now need to review the plant care that you carried and the feedback that you received.

During this activity you should consider:

- how well you carried out the work
- how well you achieved the objectives that were set for you
- did the plants require any non-routine care activities and if they did why did they need it
- were there any common failings of the work that you did.

Make recommendations for the future on how you could improve your care of plants.

Stage 2

Review the animal care

You now need to review the animal care that you carried and the feedback that you received.

During this activity you should consider:

- how well you carried out the work
- how well you achieved the objectives that were set for you
- did the animals require any non-routine care activities and if they did why did they need it
- were there any common failings of the work that you did.

Make recommendations for the future on how you could improve your care of animals.

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Pre-publication draft

4. Marking Grid

Marking grid A

Assessment focus	Mark Band 1	Mark Band 2	Mark Band 3	Maximum marks available
LO.1.1 Understand basic plant and animal requirements	Explains the reasons why plants and animals need water, food and housing (0-3)	Explains in detail the reasons why plants and animals need water, food and housing (4-5)	Comprehensively explains the reasons why plants and animals need water, food and housing (6-8)	8
LO.1.2 Understand basic plant and animal requirements	Adequately explains the reasons for providing the correct environmental conditions for plants and animals (0-3)	Appropriately explains the reasons for providing the correct environmental conditions for plants and animals (4-6)	Thoroughly explains the reasons for providing the correct environmental conditions for plants and animals (7-8)	8
LO.2.1 Know care and welfare needs of plants and animals	Identifies five common wild plants, five cultivated plants, five common wild animals and five domesticated animals with frequent assistance (0-3)	Identifies five common wild plants, five cultivated plants, five common wild animals and five domesticated animals with occasional assistance (4-5)	Identifies five common wild plants, five cultivated plants, five common wild animals and five domesticated animals with minimal assistance (6-7)	7
LO.2.2 Know care and welfare needs of	Adequately describes the water, food, handling and housing	Describes in detail the water, food, handling and housing	Describes in clear detail the water, food, handling and	

plants and animals	needs of animals (0-3)	needs of animals (4-5)	housing needs of animals (6-7)	7
Assessment focus	Mark Band 1	Mark Band 2	Mark Band 3	Maximum marks available
LO.2.3 Know care and welfare needs of plants and animals	Describes the water, food and protection needs of plants (0-3)	Describes in detail the water, food and protection needs of plants (4-5)	Thoroughly describes the water, food and protection needs of plants (6-7)	7
LO.2.4 Know care and welfare needs of plants and animals	Describes the environmental conditions required to grow and breed animals and plants (0-3)	Appropriately describes the environmental conditions required to grow and breed animals and plants (4-5)	Thoroughly describes the environmental conditions required to grow and breed animals and plants (6-7)	7
LO.3.1 Be able to work with plants and animals in a work related environment to meet specified objectives	Plans work adequately, organising time and resources (0-4)	Plans work appropriately, organising time and resources (5-7)	Plans work clearly and appropriately, organising time and resources (8-10)	10
LO.4.1				

Be able to review working with plants and animals	Reviews plant and animal care carried out using feedback to make broadly suitable recommendations for improvement (0-3)	Reviews plant and animal care carried out using feedback to make appropriate recommendations for improvement (4-5)	Reviews plant and animal care carried out using feedback to make clear and appropriate recommendations for improvement (6-8)	8
Total marks for grid A				62

Marking grid B

Assessment focus	Mark Band 1	Mark Band 2	Mark Band 3	Maximum marks available
LO.3.2 Be able to work with plants and animals in a work related environment to meet specified objectives	Carries out basic animal care to meet requirements including animal health checks (0-4)	Carries out appropriate animal care to meet requirements including animal health checks (5-7)	Carries out appropriate and comprehensive animal care to meet requirements including animal health checks (8-10)	10
LO.3.3 Be able to work with plants and animals in a work related environment to meet specified objectives	Carries out plant growing, including soil testing appropriate to meet some requirements (0-4)	Carries out plant growing, including soil testing appropriate to meet the majority of requirements (5-7)	Carries out plant growing, including soil testing appropriate to meet most requirements (8-10)	10
LO.3.4				

Unit 4 - Working with Plants and Animals (Assignment)

Be able to work with plants and animals in a work related environment to meet specified objectives	Follows health and safety guidelines when using tools, machinery and equipment when working with plants and animals for some of the time (0-3)	Follows health and safety guidelines when using tools, machinery and equipment when working with plants and animals for a majority of the time (4-6)	Follows health and safety guidelines when using tools, machinery and equipment when working with plants and animals for most of the time (7-8)	8
Total marks for grid B				28
Total marks				90

Pre-publication Draft

5. Evidence structure

Learning outcome	Marking grid	Activity/section	Evidence
LO.3	A	Planning plant and animal care	Written/recorded evidence, possibly including diagrams, graphs or charts etc (AC3.1)
LO.3	B	Practical care of plants and animals	Learner observation records (AC3.2, AC3.3, AC3.4)
LO.2	A	Knowledge of plant and animal care and welfare needs	Written/recorded evidence, possibly including diagrams, graphs or charts etc (AC2.1, AC2.2, AC 2.3, AC2.4)
LO.1	A	Understanding of basic plant and animal requirements	Written/recorded evidence, possibly including diagrams, graphs or charts etc (AC1.1, AC1.2)
LO.3	A	Review of practical care of plants and animals	Written/recorded evidence, possibly including diagrams, graphs or charts etc (AC3.5)