



## National Unit Specification: general information

**UNIT** Animal Care: Breeding (SCQF level 5)

**CODE** F6SS 11

### SUMMARY

The candidate will acquire and apply knowledge of the breeding of small animals. The Unit is aimed at those who wish to develop skills in caring for breeding stock.

### OUTCOMES

- 1 Describe the structure and function of mammalian reproductive systems in small animals.
- 2 Describe signs of oestrus in small animals.
- 3 Describe and select breeding systems for small animals.
- 4 Calculate dates and describe parturition in small animals.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

### CREDIT VALUE

1 credit at SCQF level 5 (6 SCQF credit points at SCQF level 5\*).

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

### CORE SKILLS

There is no automatic certification of Core Skills in this Unit.

There are opportunities for Core Skill development; these are highlighted in the Support Notes of this Unit Specification.

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### Administrative Information

**Superclass:** SP

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## **National Unit Specification: statement of standards**

### **UNIT        Animal Care: Breeding (SCQF level 5)**

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

#### **OUTCOME 1**

Describe the structure and function of mammalian reproductive systems in small animals.

##### **Performance Criteria**

- (a) The identification of the position of anatomical features of the male and female reproductive system of small animals is correct.
- (b) The description of the function and operation of the small animal male reproductive organs is accurate.
- (c) The description of the function and operation of the small animal female reproductive organs is accurate.
- (d) The sexing of small animals is correct.

#### **OUTCOME 2**

Describe signs of oestrus in small animals.

##### **Performance Criteria**

- (a) The identification of the signs of oestrus in small animals is correct.
- (b) The statement of frequency and duration of oestrus in small animals is correct.

#### **OUTCOME 3**

Describe and select breeding systems for small animals.

##### **Performance Criteria**

- (a) The identification of appropriate breeding systems for small animals is correct.
- (b) The selection of suitable breeding characteristics is correct.
- (c) The description of appropriate breeding records is correct.
- (d) Basic explanation of an example of genetic inheritance is correct.

## **National Unit Specification: statement of standards (cont)**

**UNIT**      Animal Care: Breeding (SCQF level 5)

### **OUTCOME 4**

Calculate dates and describe parturition in small animals.

#### **Performance Criteria**

- (a) Calculation of parturition date is correct.
- (b) Recognition of signs of approaching parturition in small animals is correct.
- (c) Description of parturition procedures in small animals is correct.
- (d) Recognition of normal and abnormal parturition in small animals is correct.

### **EVIDENCE REQUIREMENTS FOR THIS UNIT**

**All relevant operational procedures undertaken in this Unit must adhere to current legislation, regulations, codes of practice and manufacturers' recommendations where appropriate.**

Written and/or recorded oral evidence and performance evidence, supplemented with an assessor observer checklist is required to demonstrate that candidates have met the requirements of all Outcomes and Performance Criteria (PC).

#### **Outcome 1 — Written and/or recorded oral evidence**

The candidate must identify anatomical features using written and/or recorded oral and diagrammatic evidence.

The candidate must describe the function and operation of small animal reproductive organs.

#### **Performance evidence**

The candidate must describe sexing for small animals, a minimum of five animals should be covered.

#### **Outcome 2 — Written and/or recorded oral evidence**

The candidate must describe the signs, stages, frequency and duration of oestrus.

A minimum of three animals should be covered.

#### **Outcome 3 — Written and/or recorded oral evidence**

The candidate must describe:

- ◆ suitable breeding systems
- ◆ breeding stock
- ◆ appropriate record keeping.
- ◆ a basic example of genetic inheritance

A minimum of five animals must be used when referring to breeding systems.

## **National Unit Specification: statement of standards (cont)**

### **UNIT      Animal Care: Breeding (SCQF level 5)**

#### **Performance evidence**

The candidate must undertake a practical exercise to demonstrate selection of suitable breeding pairs.

#### **Outcome 4 — Written and/or recorded oral evidence**

The candidate must:

- ◆ describe signs of approaching parturition and correct procedures for parturition.
- ◆ demonstrate correct calculation of parturition dates
- ◆ recognise normal and abnormal parturition

A minimum of five animals must be used when predicting parturition dates.

Centres must be satisfied that the evidence submitted is the work of individual candidates.

When using Performance Evidence, assessor observation checklists and other assessment records should be maintained and kept up to date to keep track of candidate progress and to provide evidence for internal and external verification purposes.

## National Unit Specification: support notes

### UNIT      Animal Care: Breeding (SCQF level 5)

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

#### **GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT**

This is an optional Unit within the National Certificate in Animal Care at SCQF level 5, but may also be taken as a free-standing Unit.

This Unit is aligned to the following Lantra, Sector Skills Council's National Occupational Standard (NOS) Units:

- (AC1)      Assist with the movement and handling of animals
- (AC2)      Assist with animal feedstuffs
- (AC3)      Maintain the cleanliness of the working environment
- (CU36)     Enable animals to reproduce and care for their young
- (CU45)     Control and restrain animals
- (CU115)    Control, handle and restrain animals
- (CU1)      Maintain safe and effective working practices
- (CU3)      Promote, monitor and maintain health, safety and security

On completion of this Unit the candidate will be able to describe the structure and function of the male and female reproductive systems. He/she will be able to recognise signs of oestrus and organise suitable breeding methods for small animal species. The candidate will be able to recognise signs of normal parturition and identify when professional help should be sought.

Part of the skills for this Unit must be achieved by the handling of small animal species. Access to appropriate species must be available.

Physical Resources required:

- ◆ Handling aids, baskets, towels
- ◆ Examination area with tables
- ◆ Sterile swabs and water
- ◆ Microscope slides
- ◆ Microscope
- ◆ Biological stains
- ◆ Gloves
- ◆ Pre-prepared slides

The Unit aims to ensure that the candidate is competent in assisting with the management of breeding animals from the choice of suitable breeding stock through pregnancy to parturition. He/she should demonstrate their ability to select suitable breeding pairs.

NOTE for all Outcomes: it is expected that most reference may be made to dogs, cats and rabbits. Reference to other species and suitable examples should be used where appropriate.

## **National Unit Specification: support notes (cont)**

### **UNIT      Animal Care: Breeding (SCQF level 5)**

#### **Corresponding to Outcomes:**

##### **Outcome 1**

The candidates demonstrate their ability to recognise the parts of the mammalian male and female reproductive tract. They should be able to label diagrams showing the tracts and explain the function of each of the parts. The candidate should be able to sex small animals correctly. The following anatomical features should be covered: testes; epididymis; vas deferens; accessory sex glands; urethra; penis; ovary; oviduct; uterus; cervix; vagina; vulva; mammary glands.

A minimum of five animals must be used for sexing of animals. Species covered could include, eg dog; cat; rabbit; guinea pig; gerbil; rat; mouse; hamster; ferret.

##### **Outcome 2**

The candidate should demonstrate knowledge of how to recognise oestrus in small animals and understand how the length of the cycle and duration of oestrus varies according to species. The candidate should be able to recognise signs of oestrus in a given animal and should be able to show appreciation of the different stages of oestrus in an animal.

A minimum of three animals should be referred to during Oestrus investigation. Species covered could include: dog; cat; rabbit; guinea pig; rat; mouse; hamster; ferret.

##### **Outcome 3**

The candidates should be able to advise as to suitable breeding systems for small animal species with regard to the welfare of the animal and economy for the breeder. The candidate should be able to select suitable breeding animals, excluding those of inappropriate health, age, size, temperament, pedigree and breeding history. Attention should be paid particularly to reproductive health. There should also be regard for compatibility of breeding pairs. Some knowledge of inherited disease and examination of pedigrees would be appropriate. Candidates should be able to select breeding pairs from a group of individuals given an adequate history of each member of the group. Suitable breeding records should be prepared and maintained.

Breeding systems covered should include: harems; monogamous pairs; arranged mating; 'boxing out'.

Breeding characteristics covered should include: conformation; temperament; age; pedigree; compatibility.

A minimum of five animals must be used when referring to breeding systems. Species covered could include, eg dog; cat; rabbit; guinea pig; gerbil; rat; mouse; hamster; ferret.

Candidates should be made aware of some basic aspects of Genetic inheritance in relation to breed selection. This could take the form of the prediction of Mendelian inheritance from specific matings in terms of colour and colour patterns.

## **National Unit Specification: support notes (cont)**

### **UNIT      Animal Care: Breeding (SCQF level 5)**

#### **Outcome 4**

The candidate should be able to predict parturition dates from given mating dates and recognise physical and behavioural signs of approaching parturition. Suitable conditions should be described for the parturient animal. The candidate should be able to describe appropriate equipment to have available for parturition and recognise a normal parturition. Knowledge of when assistance should be sought during the parturition is required. Video evidence of normal parturition may be used. The candidate should be aware of potential dangers to the dam and neonates, as well as potential zoonoses at this time.

A minimum of five animals must be used when predicting parturition dates. Species covered could include, eg dog; cat; rabbit; guinea pig; gerbil; rat; mouse; hamster; ferret Parturition procedures should include: equipment; environment.

Abnormal parturition should include: presentation; timing.

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

Class teaching should explain the basis of the Unit and deliver the theoretical knowledge. The candidate should also obtain practical instruction using live animals.

Theoretical aspects should be delivered via a mixture of tutor/trainer input, group discussion, visiting speakers and the use of the internet and appropriate publications for research purposes.

#### **OPPORTUNITIES FOR CORE SKILL DEVELOPMENT**

There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

*Communications, Numeracy, ICT , Problem Solving* and the *Working with Others* components will be some of the Core Skills used in this Unit

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

##### **Outcome 1**

The candidate could be presented with diagrams of the male and female reproductive tracts and asked to label a minimum of five structures on each diagram to satisfy Performance Criterion (a). The candidate could then be set 10 short answer questions to test their knowledge of the function of the male and female reproductive organs to satisfy Performance Criteria (b) and (c). A practical exercise should be set to demonstrate correct sexing of at least two species. The assessment could be carried out with the aid of an observation checklist.

## National Unit Specification: support notes (cont)

### UNIT      Animal Care: Breeding (SCQF level 5)

Satisfactory achievement of this Outcome will be based on the candidate producing eight correct responses for Performance Criterion (a) and seven correct responses for Performance Criteria (b) and (c) and satisfying the requirements of the performance evidence checklist.

#### Outcome 2

The candidate could be presented with five restricted response questions to satisfy Performance Criteria (a), (b).

Satisfactory achievement of this Outcome will be based on the candidate producing four correct responses for Performance Criteria (a), (b).

#### Outcome 3

The candidate could be presented with 10 restricted response questions to satisfy Performance Criteria (a), (c) and (d)

A practical exercise could be set to test the application of skill and knowledge required to select suitable breeding pairs [PC (b)]. The assessment could be carried out with the aid of an observation checklist.

#### Outcome 4

The candidate could be presented with 10 restricted response questions to satisfy Performance Criteria (a), (b) and (c).

Three short answer questions could be set on diagrams showing normal and abnormal presentations at parturition to satisfy Performance Criterion (d).

Satisfactory achievement of this Outcome will be based on the candidate producing seven correct responses for Performance Criteria (a), (b) and (c) and two correct responses for Performance Criterion (d).

Time should be allowed for any necessary re-assessment.

#### Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.



## **National Unit Specification: support notes (cont)**

**UNIT**      Animal Care: Breeding (SCQF level 5)

### **DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements)