SEG Awards ABC Level 2 Award and Certificate for Animal Nursing Assistants

Qualification Guidance

England
Level 2 Award - [60002207]
Level 2 Certificate - [60002219]

Wales
Level 2 Award - [C0003138]
Level 2 Certificate - [C0003139]

A9119-02 C9119-02
60002207 60002219

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About Us

At Skills and Education Group Awards we continually invest in high quality qualifications, assessments and services for our chosen sectors. As a UK leading sector specialist we continue to support employers and skills providers to enable individuals to achieve the skills and knowledge needed to raise professional standards across our sectors.

Skills and Education Group Awards has an on-line registration system to help customers register learners on its qualifications, units and exams. In addition it provides features to view exam results, invoices, mark sheets and other information about learners already registered.

The system is accessed via a web browser by connecting to our secure website using a username and password: Skills and Education Group Awards Secure Login

Sources of Additional Information

Skills and Education Group Awards website www.skillsandeducationgroupawards.co.uk provides access to a wide variety of information.

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This is a live document and as such will be updated when required. It is the responsibility of the approved centre to ensure the most up-to-date version of the Qualification Guide is in use. Any amendments will be published on our website and centres are encouraged to check this site regularly.

Qualification Summary

Level 2 Award and Certificate for Animal Nursing Assistants

Qualifications	
Level 2 Award for Animal Nursing Assistants Level 2 Certificate for Animal Nursing Assistants	
Regulated	The qualifications identified above are all regulated by Ofqual and Qualifications Wales.
Assessment	Internal assessment, internal and external moderation **Unit [A/502/7622] 'Companion animal anatomy and physiology' will include assessment by externally set questions which will be internally assessed and externally moderated.**
Grading	Pass
Operational Start Date	01/01/2011
Review Date	31/08/2022
Operational End Date	31/08/2022
Certification End Date	31/08/2025
Skills and Education Group Awards Sector	Land Based / Environmental
Ofqual SSA Sector	03.3 Animal Care and Veterinary Science
Stakeholder support	This qualification is supported by Lantra, the Sector Skills Council for environmental and land-based industries
Contact	See Skills and Education Group Awards web site

Level 2 Award for Animal Nursing Assistants

Rules of Combination: Learners must achieve 12 credits. This will include 4 credits from the mandatory unit in group A, plus 8 credits from the optional units in groups B and C. Only one optional unit can be chosen from group C.

Unit	Level	Credit Value	GLH
Group A - Mandatory Unit			
Principles of basic animal nursing assistance [M/502/7617]	2	4	30
Group B - Optional Units			
Deliver basic treatments to animals [Y/502/1505]	2	5	38
Maintain animal accommodation [Y/502/1522]	2	3	23
Control and restrain animals [Y/502/1536]	2	2	15
Provide controlled exercise opportunities for animals [K/502/1556]	2	4	30
Provide opportunities for animals to have freedom to exercise [A/502/1559]	2	4	30
Provide feed and water to animals [D/502/1473]	2	3	23
Principles of companion animal pharmacy [A/502/7619]	2	3	28
Principles of infection control for animal nursing assistants [M/502/7620]	2	3	25
Exotic animal anatomy and physiology [T/502/7621]	2	4	30
Companion animal anatomy and physiology [A/502/7622]	2	5	38
Companion animal nutrition [J/502/7624]	2	2	12
Companion animal parasitology and zoonosis [L/502/7625]	2	2	18
Principles of companion animal anaesthesia and fluid therapy [R/502/7626]	2	2	15
Plan the handling and restraint of animals [R/502/1468]	3	4	26
Group C – Optional Units **Learners may only choose 1 unit from this group as part of this Award**			

Keep stock on sale at required levels in a retail environment [L/503/5661]	2	3	16
Process customer orders for goods in a retail environment [R/503/5662]	2	3	19
Carry out reception duties [M/502/1610]	2	2	15
Meet and welcome visitors [Y/601/2457]	2	3	23
Store and retrieve information [R/601/2490]	2	3	17

Numbers in box brackets indicate unit number

Qualification Purpose	B. Prepare for further learning or training and/or develop knowledge and/or skills in a subject area B1. Prepare for further learning or training B2. Develop knowledge and/or skills in a subject area					
Entry Requirements	16+					
Age Range	**Pre 16**		**16 – 18**	✓	**19 +**	✓
LARS Reference	60002207					
Recommended GLH[1]	90					
Recommended TQT[2]	120					
Credit Value	12					
Type of Funding Available	See LARS (Learning Aim Rates Service)					
Minimum Qualification Fee	See Skills and Education Group Awards web site for current fees and charges					
Unit Fee	Unit fees are based upon a unit's individual credit value. Please see the Skills and Education Group Awards web site for the current fee charged per credit.					
Additional Information	See Skills and Education Group Awards website for resources available for these qualifications					

[1] See Glossary of Terms

[2] See Glossary of Terms

Level 2 Certificate for Animal Nursing Assistants

Rules of Combination: Learners must achieve a minimum of 32 credits. This will include 19 credits from the mandatory units in Group A and a minimum of 13 credits from the optional units in Group B.

Unit	Level	Credit Value	GLH
Group A Mandatory Units			
Deliver basic treatments to animals [Y/502/1505]	2	5	38
Maintain animal accommodation [Y/502/1522]	2	3	23
Provide feed and water to animals [D/502/1473]	2	3	23
Principles of infection control for animal nursing assistants [M/502/7620]	2	3	25
Companion animal anatomy and physiology [A/502/7622]	2	5	38
Group B Optional Units			
Principles of basic animal nursing assistance [M/502/7617]	2	4	30
Control and restrain animals [Y/502/1536]	2	2	15
Provide controlled exercise opportunities for animals [K/502/1556]	2	4	30
Provide opportunities for animals to have freedom to exercise [A/502/1559]	2	4	30
Principles of companion animal pharmacy [A/502/7619]	2	3	28
Exotic animal anatomy and physiology [T/502/7621]	2	4	30
Companion animal nutrition [J/502/7624]	2	2	12
Companion animal parasitology and zoonosis [L/502/7625]	2	2	18
Principles of companion animal anaesthesia and fluid therapy [R/502/7626]	2	2	15
Plan the handling and restraint of animals [R/502/1468]	3	4	26
Keep stock on sale at required levels in a retail environment [L/503/5661]	2	3	16

Process customer orders for goods in a retail environment [R/503/5662]	2	3	19
Carry out reception duties [M/502/1610]	2	2	15
Meet and welcome visitors [Y/601/2457]	2	3	23
Store and retrieve information [R/601/2490]	2	3	17
Companion animal anatomy and physiology [Y/502/7627]	3	8	60
Exotic animal anatomy and physiology [D/502/7628]	3	8	60

Numbers in box brackets indicate unit number

Qualification Purpose	B. Prepare for further learning or training and/or develop knowledge and/or skills in a subject area B1. Prepare for further learning or training B2. Develop knowledge and/or skills in a subject area					
Entry Requirements	16+					
Age Range	**Pre 16**		**16 – 18**	✓	**19 +**	✓
LARS Reference	60002219					
Recommended GLH[3]	242					
Recommended TQT[4]	320					
Credit Value	32					
Type of Funding Available	See LARS (Learning Aim Rates Service)					
Minimum Qualification Fee	See Skills and Education Group Awards web site for current fees and charges					
Unit Fee	Unit fees are based upon a unit's individual credit value. Please see the Skills and Education Group Awards web site for the current fee charged per credit.					
Additional Information	See Skills and Education Group Awards website for resources available for these qualifications					

[3] See Glossary of Terms
[4] See Glossary of Terms

Introduction

The Animal Nursing Assistants qualification has been developed for learners seeking a specialised qualification in animal nursing, with the overall aim being to prepare learners for a career in animal care or Veterinary Nursing, based within a Veterinary Practice.

The Level 2 Certificate for Animal Nursing Assistants is held in high regard in veterinary practices, providing an alternative route to GCSE's and enhanced opportunities to progress to the Royal College of Veterinary Surgeons Level 3 Diploma in Veterinary Nursing. The new Award offers learners the opportunity to achieve a smaller qualification in a shorter space of time which can be credit transferred to the Certificate, or be a recognised qualification in its own right.

The credit target for the Award is 12 credits; the credit target for the Certificate is 32 credits. This qualification will be put forward for inclusion on the ASL catalogue. Please check the Skills and Education Group Awards web site for the current status of this qualification within the ASL catalogue.

Aims

The Level 2 Award and Certificate for Animal Nursing Assistants aims to facilitate learners' further progression for a career in animal care or Veterinary Nursing, based within a Veterinary Practice.

The course covers a number of units including Anatomy and Physiology, Principles of Infection Control and Parasitology and Zoonosis. It provides learners with the information required to play a valuable support role to qualified veterinary staff and to assist owners in the correct management of their companion animals. Further to this, learners have the opportunity to learn basic practice reception skills and retailing of products.

The Certificate (plus level 2 qualifications in Mathematics and English, either Key Skills or nationally accepted alternatives) opens up opportunities to progress to the revised RCVS Level 3 Diploma in Veterinary Nursing for mature students and those without the required

entry qualifications; it will also allow those working in practice who have no wish to undertake the veterinary nursing scheme to gain a recognised and relevant qualification that befits their role at work.

Target Group

These qualifications are designed for

- School leavers with insufficient GCSEs to register as a student veterinary nurse
- Non-qualified veterinary staff
- Mature learners
- Learners wishing to work with companion animals

Skills and Education Group Awards expects approved centres to recruit with integrity on the basis of a learner's ability to contribute to and successfully complete all the requirements of a unit/s or the full qualification.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. It is important that practical assessment activities are supervised appropriately. Learners may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

Progression Opportunities

Learners who achieve the Certificate and who also have level 2 qualifications in Mathematics and English (either Key Skills or nationally accepted alternatives) can apply to register for the Royal College of Veterinary Surgeons Level 3 Diploma in Veterinary Nursing, which leads to a professional qualification as a veterinary nurse.

If, at the end of the course, the learner decides that veterinary nursing is not the career that they wish to progress to, they will still have gained valuable training. This will enable them to work within other areas of veterinary practice such as veterinary kennels/wards and veterinary reception. Their experience will also allow progression in other sectors of the animal industry, such as pet stores, boarding kennels or animal charities.

Centres must implement a guidance procedure and an equal opportunities policy. Centres must be satisfied that all learners accepted will be capable of achieving the outcomes of the course at the stated level.

Centres should be aware that reasonable Adjustments which may be permitted for assessment may in some instances limit a learner's progression into the sector. Centres must, therefore, inform learners of any limits their learning difficulty may impose on future progression

Language

These specifications and associated assessment materials are in English only.

Unit Details

Principles of Basic Animal Nursing Assistance

Unit Reference	**M/502/7617**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The purpose of this unit is to give learners an understanding of how to assist in the basic nursing of animals. This involves an introduction to first aid; how to describe and identify wounds and injuries and shock. Learners will also develop the knowledge of recording an animal's temperature, pulse and respiration and be able to recognise and identify abnormalities
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.4)** ***The learner can***
1. Appreciate the role of animal first aid	**1.1** State the aims of animal first aid **1.2** Describe the limitations of animal first aid according to the veterinary surgeons act **1.3** Explain suitable restraint methods and equipment to be used when administering first aid to animals **1.4** Describe how to assess the animal first aid patient

2. Appreciate how to assist the nursing of animals with wounds	**2.1** Describe the key presenting characteristics of two of the following types of wound • incised • laceration • avulsed • puncture • contusion • abrasion • burns **2.2** Describe the appropriate first aid treatment for two of these wounds **2.3** List and describe suitable wound dressings and bandages to be used for the two chosen wounds **2.4** Describe the key presenting characteristics of arterial and venous haemorrhages **2.5** Describe first aid methods to be used to control haemorrhage
3. Appreciate how to assist the nursing of animals with injuries	**3.1** Describe the key presenting characteristics of two of the following types of injury • fracture • stings • dislocations • bites • poisonings **3.2** Describe the appropriate first aid treatment for two of these injuries
4. Appreciate the causes of shock	**4.1** Identify two common reasons for shock **4.2** Describe the clinical signs of shock **4.3** Describe the first aid treatment of shock

5. Know how to monitor animals temperature, pulse and respiration	**5.1** Describe how to prepare, use and store thermometers **5.2** State the normal temperature range of canines and felines **5.3** Employ correct terminology to describe temperatures **5.4** Identify two possible reasons for abnormal recordings **5.5** Describe how to take canine and felines pulses **5.6** State the normal pulse range of canines and felines **5.7** Employ correct terminology to describe pulses **5.8** Identify two possible reasons for abnormal recordings **5.9** Describe how to take canine and felines respiration **5.10** State the normal respiration range of canines and felines **5.11** Employ correct terminology to describe respiratory rates **5.12** Identify two possible reasons for abnormal recordings
6. Know how to support the wellbeing of animals undergoing treatment	**6.1** Describe how to provide adequate physical and mental stimulation to animal in-patients **6.2** Identify reasons for reduced/withdrawn exercise for animal

	in-patients **6.3** Describe strategies to support exercise and mobility **6.4** Describe two potential problems associated with lack of exercise
7. Know the limits of their responsibility	**7.1** Identify the boundaries of responsibility for an Animal Nursing Assistant and the activities commonly undertaken within clinical practice **7.2** Identify the key implications of the Veterinary Surgeons Act for an Animal Nursing Assistant **7.3** Identify the key implications of postal regulations for veterinary samples **7.4** Comply with relevant health and safety regulations legislation

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
AUX6 3/ e, f, g, j
CU45 1, 2, 3, 5, 6, 7, 8/ c, d, g, h, i
RVN6 4/ c, e
RVN7 d
RVN10 3/ e
RVN17 6, 9/ a, d, g
RVN31 2, 3/ b, c

Supporting Unit Information

M/502/7617 Principles of basic animal nursing assistance – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. 1.1

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Learning Outcome 1. Appreciate the role of animal first aid

1.1 State the aims of animal first aid Preserve life, prevent suffering, prevent deterioration of patient condition

1.2 Describe the limitations of animal first aid according to the veterinary surgeons act Veterinary nurses and owners can administer first aid that does not involve acts of veterinary surgery, VNs and RVNs can administer medical treatment and minor surgery (not involving entry to body cavities) under direction of a veterinary surgeon

1.3 Explain suitable restraint methods and equipment to be used when administering first aid to animals Muzzles, dog catchers, Halti, Collar and leads, chemical restraint, cat bags, crush cages, cat graspers, towels

1.4 Describe how to assess the animal first aid patient Assess temperature, pulse and respiration, state of consciousness, haemorrhage, visible injuries, signs of shock, weight bearing/movement, inflammation

Learning Outcome 2. Appreciate how to assist the nursing of animals with wounds

2.1 Describe the key presenting characteristics of two of the following types of wound

- incised – clean edges, close edges, moderate haemorrhage, heal quickly
- laceration – irregular edges, minimal haemorrhage, slow healing
- avulsed – flap of skin, at least one edge still attached
- puncture – small skin wound, deep underlying tract
- contusion – haemorrhage under the skin, warm skin, discolouration
- abrasion – removal of epidermis, dermal layer exposed, graze wound, painful due to exposure of nerves
- burns – reddened damaged skin, moist skin, heat, swelling, pain, alopecia

2.2 Describe the appropriate first aid treatment for two of these wounds

- incised – assess and control haemorrhage, remove foreign bodies if safe, clip away hair, clean wound, apply sterile dressing/bandage
- laceration – see incised
- avulsed – see incised
- puncture – see incised
- contusion –apply a cold compress
- abrasion – clip away hair, clean wound, apply a sterile dressing
- burns – cool with sterile running water/saline, maintain and monitor body temperature, apply lint free non adhesive dressing.

2.3 List and describe suitable wound dressings and bandages to be used for the two chosen wounds e.g.

- incised – dry dressing, impregnated gauze, non-adhesive, adhesive, padding, conforming, cohesive
- laceration – see incised and occlusive dressings, haemostatic dressings, hydrogel dressing, interactive dressings
- abrasion – see laceration

2.4 Describe the key presenting characteristics of arterial and venous haemorrhages Bright red and pumping (arterial), dark red and flowing in steady stream (venous)

2.5 Describe first aid methods to be used to control haemorrhage Direct/indirect digital pressure – apply hand or digits to damaged vessel, pressure bandage – use padding and conforming bandage under tension to provide pressure to arrest haemorrhage, tourniquets – use narrow material or proprietary tourniquet above the damaged vessel to stem blood flow to the vessels. Use with caution.

Learning Outcome 3. Appreciate how to assist the nursing of animals with injuries

3.1 Describe the key presenting characteristics of two of the following types of injury

- **fracture** – loss of movement/use, non-weight bearing, pain, inflammation, redness, heat, crepitus, visibility of fractured bones, abnormal presentation
- **stings** –redness, pain, inflammation, presence of sting
- **dislocations** – non weight bearing, reduced function, abnormal presentation, pain
- **bites** – visible injury, haemorrhage, inflammation
- **poisonings** – dependant on cause, vomiting, diarrhoea, collapse, shock, ataxia, hyper salivation, depression

3.2 Describe the appropriate first aid treatment for two of these injuries

- **fracture** – immobilisation, treat for shock, bandage, splint
- **stings** – apply dilute vinegar (wasp) or bicarbonate of soda (bee) and remove sting (bee)
- **dislocations** – immobilisation, treat for shock
- **bites** – cold compress, monitor for swelling, clean wound, dress
- **poisonings** – identify poison, induce vomiting (if non corrosive/non acidic), administer demulcents, contact Veterinary Poisons Information Service

Learning Outcome 4. Appreciate the causes of shock

4.1 Identify two common reasons for shock External/internal haemorrhage, body fluid losses, trauma, anaphylaxis, endotoxic

4.2 Describe the clinical signs of shock Tachycardia, cold extremities, tachypnoea, weak, rapid pulse, dilated pupils, collapse, pale mucous membranes, increased capillary refill time, rapid, shallow respiration, subnormal temperature, decreased urinary output, , unconsciousness, collapse, convulsions.

4.3 Describe the first aid treatment of shock Monitor condition, arrest haemorrhage, provide warmth, reduced lighting, reduced noise, maintain observations, TLC

Learning Outcome 5. Know how to monitor animals temperature, pulse and respiration

5.1 Describe how to prepare, store and use thermometers Clean with antiseptic and cool water solution before use, restrain patient,

ensure mercury is flicked into bulb if applicable, lubricate end, insert into rectum using a twisting motion and hold against rectum for 1 minute, wipe clean and store in antiseptic solution ready for next patient. Store in a accessible area.

5.2 State the normal temperature ranges for canines and felines Canine 38.3^{0}C – 38.7^{0}C, felines 38.0^{0}C – 38.5^{0}C

5.3 Employ correct terminology to describe temperatures Pyrexia – raised temperature, hypothermia – sub normal temperature, diphasic – fluctuating temperature.

5.4 Identify two possible reasons for abnormal recordings Shock, general anaesthesia/sedation, hypovolaemia, circulatory collapse, exposure to extreme temperatures, pain, inflammation, infection, convulsion

5.5 Describe how to take canine and feline pulses Restrain patient, locate suitable artery, apply slight pressure with finger until pulse is palpable, count and record beats for one minute

5.6 State the normal pulse range of canine and felines Canine 60-180 bpm, feline 110-180bpm

5.7 Employ correct terminology to describe pulses Tachycardia – increased heart rate, bradycardia – decreased heart rate

5.8 Identify two possible reasons for abnormal recordings Shock, general anaesthesia/sedation, unconsciousness, pain, dehydration, exercise, hypoxia, fear

5.9 Describe how to take canine and feline respiration Observe or feel chest movements, count either inspiration or expiration for one minute

5.10 State the normal respiration range for canine and felines Canine 10-30bpm, feline 20-30bpm

5.11 Employ correct terminology to describe respiratory rates Tachypnoea – increased respiration, bradypnoea – decreased respiration, dyspnoea – difficulty breathing, apnoea – cessation of breathing, cheyne stokes – pattern of deep breaths, followed by rapid shallow breaths, followed by apnoea. Often followed by death.

5.12 Identify two possible reasons for abnormal recordings Shock, pain, stress, fear, heat, general anaesthesia/sedation, poisoning, obstruction, pneumonia

Learning Outcome 6. Know how to support the wellbeing of animals undergoing treatment

6.1 Describe how to provide adequate physical and mental stimulation to animal in-patients Talking, stroking, grooming,

taking outside where applicable, exercise where applicable, enrichment, select and adjust to patient species/needs/condition, physiotherapy, familiar belongings

6.2 Identify reasons for reduced/withdrawn exercise for animal in-patients Conserve energy requirements, surgical/medical contraindications, geriatric patients

6.3 Describe strategies to support exercise and mobility Stretchers – material with metal support poles provide spinal support, blankets – used underneath the abdomen to support body weight, slings – proprietary or home-made, hydrotherapy – exercise and movement within water, physiotherapy – exercise and massage to support and maintain movement.

6.4 Describe 2 potential problems associated with lack of exercise Obesity, stress, boredom, stereotypical behaviour – such as pacing, over grooming, self-mutilation – chewing, licking, reduced exercise tolerance, reduced mobility

Learning Outcome 7. Know the limits of their responsibility

7.1 Identify the boundaries of responsibility for an Animal Nursing Assistant and the activities commonly undertaken within clinical practice Assisting, cleaning, animal husbandry, within the Veterinary Surgeons Act definitions and guidelines

7.2 Identify the key implications of the Veterinary Surgeons Act for an Animal Nursing Assistant Can administer first aid to alleviate suffering that does not involve acts of veterinary surgery

7.3 Identify the key implications of postal regulations for veterinary samples Name and address of both sender and recipient, name and telephone number of responsible person (sender) on package, leak-proof sample containers, layer of absorbent material, secondary leak-proof layer, list of contents/relevant paperwork between secondary leak-proof layer and outer layer, rigid outer layer, clearly label – "pathological sample – fragile – with care"

7.4 Comply with relevant health and safety regulations legislation Health and Safety at work Act 1974, Reporting of Injuries, Diseases and Dangerous Occurrence Regulations 1995, Control of Substances Hazardous to Health Regulations 2002, Manual Handling Regulations 1992

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace' may be of an employed, voluntary or non-employed status, but the learner must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria.

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence

- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- Veterinary Nursing - D.R.Lane and B.Cooper
- The Complete Text book of Veterinary Nursing - Victoria Aspinall
- HSE web site
- Animal Nursing Assistant Textbook - Jo Masters and Carole Martin

See Skills and Education Group Awards web site for further information

Deliver Basic Treatments to Animals

Unit Reference	**Y/502/1505**
Level	**2**
Credit Value	**5**
Guided Learning Hours	**38**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to deliver basic treatments to animals. The word 'treatments' is used in its broadest sense to include: cleaning and hygiene procedure, basic health care treatments and other routine procedures. **In accordance with the Veterinary Surgeons Act Schedule 3 lay persons may not provide medical treatments to animals. In Learning Outcome 2 of this unit, learners must only provide medication prescribed by, and under the direct supervision of, a veterinary practitioner in accordance with current RCVS guidelines**
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.2)** ***The learner can***
1. Be able to deliver basic treatments to animals	Use the correct technique to give the specified treatment at the correct time. Treatments to include • cleaning and hygiene procedures • basic health care treatments • routine procedures **(see indicative content below)**

	1.2 Immediately seek assistance when it is not possible to carry out the treatment **1.3** Ensure records of the treatment are accurate, legible and complete and comply with any legislative requirements **1.4** Observe animals after treatments and immediately report any unusual signs
2. Be able to provide prescribed medication	**2.1** Provide the following current and uncontaminated prescribed medication only for the intended animal • preventative • prescriptive **2.2** Use and store drugs, medications and equipment in accordance with veterinary instructions and organisational policy
3. Be able to work safely and minimise environmental damage	**3.1** Work in a way which maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements **3.2** Dispose of waste safely and correctly
4. Know how to deliver basic treatments to animals	**4.1** Describe the equipment to select for each treatment **4.2** Describe how to administer prescribed basic health care treatments **4.3** State the importance of keeping to instructions for basic health care treatments

	4.4 Describe the potential consequences of not keeping to instructions and procedures for carrying out treatments **4.5** Describe how to use restraint techniques **4.6** State the reasons and legislative requirements for 'withdrawal periods' for animals **4.7** Outline the reasons for personal hygiene and safety precautions (e.g. communicable diseases between animals and humans) **4.8** Describe the changes in the condition of the animal which may occur after the treatment **4.9** State why it is necessary to monitor the behaviour of animals after treatment and report unusual signs **4.10** Identify the types of records required and explain the importance of accurate record keeping
5. Know how to provide prescribed medication to animals	**5.1** State the significance of expiry dates on drugs and medications **5.2** Describe the possible sources of contamination to medication and how to identify damage
6. Know relevant health and safety and animal welfare legislation	**6.1** Outline the current health and safety legislation, animal welfare, codes of practice and any additional requirements **6.2** Describe the correct methods for disposing of waste

Mapping to National Occupational Standards This unit is mapped to Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010 **AUX6** 1 to 11, a to m **CU2** 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15/ a to l, n to r, t to w **AC3** 6/ g **CU7.2** 1, 2, 3, 4/ b, c, d, g, j, k, l **RVN10** 1 to 13/ a to k, m **AUX3** 5,7/ g, i	

Supporting Unit Information

Y/502/1505 Deliver basic treatments to animals - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. 1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Note 3 For the purpose of this indicative content a canine will be discussed, however this should be adapted to apply to a range of species

LO1, LO2 and LO3 are outcomes of achievement for this unit.

Learning Outcome 1. Be able to deliver basic treatments to animals

1.1 Use the correct technique to give the specified treatment at the correct time Treatments to include

- **cleaning and hygiene procedures** grooming, bathing, nail clipping, ear cleaning
- **basic health care treatments** under the Veterinary Surgeons Act Schedule 3 lay persons are not permitted to carry out acts of veterinary surgery. Therefore basic health care treatments would include prophylactic treatments such as wormers, flea treatments, medication under the direct supervision of a veterinary surgeon and medicated shampoos
- **routine procedures** follow instructions, record procedure completed and response

1.2 Immediately seek assistance when it is not possible to carry out the treatment seek assistance from colleagues and supervisors

1.3 Ensure records of the treatment are accurate, legible and complete and comply with any legislative requirements – record

all information as soon as treatment has been carried out, record in a clear manner either verbal, written or electronic, ensure records are kept and are current.

1.4 Observe animals after treatments and immediately report any unusual signs observe for signs of stress or reactions. Monitor vital signs temperature, pulse and respiration. Signs of reaction may include panting, vomiting, vocalisation, increased or decreased pulse and or respiratory rates, pyrexia, hypothermia, collapse, fits. Report any signs to supervisor and complete a written record.

Learning Outcome 2. Be able to provide prescribed medication

2.1 Provide the following current and uncontaminated prescribed medication only for the intended animal

- **preventative** prophylactic treatments such as flea treatment, wormers, medicated creams and shampoos
- **prescriptive** follow prescription accurately on medications such as antibiotics, anti-inflammatories

2.2 Use and store drugs, medications and equipment in accordance with veterinary instructions and organisational policy administer following prescription i.e. dose and route. Store drugs appropriately to their classification – shelves, refrigerated, locked cabinets. Ensure equipment is stored in correct location, clean and ready for use. Follow veterinary legislation and practice procedures.

Learning Outcome 3. Be able to work safely and minimise environmental damage

3.1 Work in a way which maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements wash hands before and after administering treatment. Wear gloves when dispensing and administering treatments. Seek assistance for restraint when required. Work in a safe and secure area. Dispose of veterinary waste following correct procedures.

3.2 Dispose of waste safely and correctly follow legislation such as Controlled Waste Regulations 1992 and the Environmental Protection Act 1990. Separate waste into approved containers.

LO4, LO5 and LO6 are knowledge outcomes.

Learning Outcome 4. Know how to deliver basic treatments to animals

4.1 Describe the equipment to select for each treatment pill givers, pill splitters pipettes, needles, syringes, PPE such as gloves and aprons

4.2 Describe how to administer prescribed basic health care treatments follow prescription and veterinary direction. Wear PPE see LO4.1. Seek assistance for restraint. Follow correct route and dosage. This may include oral, topical or parental.

4.3 State the importance of keeping to instructions for basic health care treatments to ensure correct treatment and dose is given to the correct animal. To ensure doses are not repeated or missed.

4.4 Describe the potential consequences of not keeping to instructions and procedures for carrying out treatments incorrect treatment or dose being given. Deterioration or lack of recovery of patient. Hazards to staff. Potential side effects of incorrect treatment see LO1.4

4.5 Describe how to use restraint techniques ensure method used is suitable to individual. Approach quietly and confidently, ensure on animals level but at a safe distance. Restrain on non-slip surfaces in an escape proof area. Ensure head is in a secure hold. Support the body and allow access to area needed. Use equipment where necessary such as slip leads, haltis, muzzles – appropriate size, dog catcher and chemical restraint.

4.6 State the reasons and legislative requirements for 'withdrawal periods' for animals the amount of time needed for an animal to metabolise a drug and be reduced to a "safe" level in tissues. Relevant to food producing animals. Animals cannot be sold or supplied for human consumption before withdrawal periods are complete.

4.7 Outline the reasons for personal hygiene and safety precautions (e.g. communicable diseases between animals and humans) to prevent cross contamination between patients, prevent transmission of zoonotic disease, prevent injury to those administering medication, prevent absorption or ingestion of drug by humans.

4.8 Describe the changes in the condition of the animal which may occur after the treatment improvement of clinical signs, prevention or treatment of condition. See LO1.4

4.9 State why it is necessary to monitor the behaviour of animals after treatment and report unusual signs to ensure treatment type, route and dose is effective. To record any reactions to the treatment. Signs must be reported to enable further monitoring and changes of treatment.

4.10 Identify the types of records required and explain the importance of accurate record keeping written, verbal and

electronic. Patient files and hospitalisation records. These should include treatment, frequency, dose and route. Accurate records must be kept to enable accurate monitoring and communication.

Learning Outcome 5. Know how to provide prescribed medication to animals

5.1 State the significance of expiry dates on drugs and medications expiry date is the date to which the manufacturer can guarantee the potency and safety of the drug.

5.2 Describe the possible sources of contamination to medication and how to identify damage bacteria from other animals or contaminated equipment, damp, mould. Damage can be identified by damaged packaging, change in appearance, disintegration.

Learning Outcome 6. Know relevant health and safety and animal welfare legislation

6.1 Outline the current health and safety legislation, animal welfare, codes of practice and any additional requirements The Veterinary Medicines Regulations 2005, The Misuse of Drugs Act 1971, The Misuse of Drugs Regulations 2001, RCVS Guide to Professional Conduct, Health & Safety at Work Act, Veterinary Surgeons Act 1966

6.2 Describe the correct methods for disposing of waste see LO3.2

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Maintain Animal Accommodation

Unit Reference	**Y/502/1522**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner the knowledge and skills required to maintain animal accommodation. This involves maintaining environmental conditions, carrying out cleaning, and replacing any ancillary materials
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.3)** ***The learner can***
1. Be able to maintain animal accommodation	**1.1** Assess the condition of the animal and accommodation before maintaining covering • the suitability of accommodation to the animal concerned • allowing the necessary freedom of movement • minimising animal stress **1.2** Wear the appropriate protective clothing during cleaning and maintaining **1.3** Carry out cleaning routines according to the animal accommodation and specification **1.4** Replace any necessary materials and fittings correctly when cleaning is complete

	1.5 Monitor and maintain environmental conditions to promote the health and welfare of animals • ventilation • light • structure • temperature • noise **1.6** Maintain the safety and security of the animals during cleaning operations **1.7** Report any difficulties to the relevant person if necessary **1.8** Provide clear and accurate information for recording purposes
2. Be able to work safely and minimise environmental damage	**2.1** Work in a way which maintains health and safety and is consistent with animal welfare legislation, codes of practice and any additional requirements **2.2** Carry out work in a manner which minimises environmental damage **2.3** Dispose of waste safely and correctly
3. Know why it is important to maintain animal accommodation	**3.1** Describe why it is important to maintain animal accommodation and the implications of failing to do so **3.2** Describe the relationship between maintaining animal accommodation and promoting animal health and welfare **3.3** State how other factors would influence the maintenance of accommodation for animals (health, age and behaviour)

	3.4 Describe signs within an animal's accommodation that give an indication of its health and welfare
4. Know how to maintain animal accommodation	**4.1** Describe the environmental conditions which promote the health and welfare of animals **4.2** Identify the reasons for monitoring environmental conditions and reporting variations **4.3** Outline cleaning routines appropriate to the animal species concerned and the accom modation in which they are being kept and reasons for being housed **4.4** Describe cleaning methods and materials appropriate to the animal species concerned and the accommodation in which they are being kept and reasons for being housed **4.5** Describe how to recognise signs of stress and abnormal behaviour in animals before, during and after maintaining accommodation and what actions should be taken
5. Know how to maintain materials and fittings	**5.1** State how to maintain materials and fittings to ensure the health and welfare of animals using accommodation
6. Know relevant health and safety and animal welfare legislation and environmental good practice	**6.1** Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements **6.2** Describe how environmental damage can be minimised

	6.3 Describe the correct methods for disposing of organic and inorganic waste

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
AC3 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14/ ,b, e, f, g, h, , k, m, p, q
CU2 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15/ a to l, n to r, t to w
CU37 1 to 17/ a to v
RVN2 7/ q
RVN3 1, 3, 4, 8, 12, 13/ a, d, g, o
RVN9 1, 2, 3, 4, 5, 13, 15, 16, 17, 18, 19/ a to g

Supporting Unit Information

Y/502/1522 Maintain animal accommodation - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 The examples used here are guinea pigs however any appropriate species or mixture of species can be used

LO1, LO2 are the key areas of competence for this unit.

Learning Outcome 1. Be able to maintain animal accommodation

1.1 Assess condition of animal and its accommodation

- Check design is suitable (size, fittings and materials) penning well sited, for inside/outside pens and hutches. They must be well lit, safe and warm, not too noisy, well ventilated and clean (guinea pigs are susceptible to ammonia fumes resulting in pneumonia) with suitable nesting box available to hide and sleep, for warmth and companionship. Accommodation is correct for circumstance/requirement - long stay i.e. permanent housing. Short stay i.e. temporary accommodation for use when cleaning out permanent accommodation or transport to new accommodation or to vets for example, hospitalization e.g. at vets, isolation/quarantine to prevent fighting, breeding or transmission of diseases accommodation for breeding, will be larger with a bigger than normal very well bedded nesting area, or for display purposes so they can be seen more easily by visitors. Check condition of guinea pig. Poor

condition e.g. cleanliness, health and well-being can indicate inappropriate accommodation.

- Guinea pigs have necessary area for freedom of movement i.e. size dependant on numbers mature size and duration of stay.
- Minimise stress to guinea pig while assessing conditions. Assess from correct distance preferably without entering animals flight zone.

1.2 Wear correct PPE E.g. Overalls, gloves, boots

1.3 Carry out cleaning routines according to the animal accommodation and specification specification as detailed by person in charge e.g. Your line manager who could be section manager, farmer, small holder, pet owner, keeper, teacher, team leader) All wet and dirty material removed, flooring (preferably water resistant) cleaned and disinfected as required. Clean and dry bedding (e.g. soft hay) placed in house.

Check safety and security of accommodation – accommodation must be vermin, predator, wind and waterproof. Healthy and animal welfare environment - A warm, draft free, enclosed living /sleeping area is essential, within the main larger run as guinea pigs like to nestle up together in confined but not too small area. Areas for exercise and play designed to prevent boredom, box and hutch chewing etc. Food should be well balanced varied, and they need a good supply of water.

1.4 Replace fittings and materials when cleaning complete Clean buckets and utensils used in the feeding process and replace correctly in readiness for the next feed time, also mend or report any damage to facilities and the equipment used to person in charge, ref LO1.3. All other fixtures and fittings replaced with appropriate bedding, from storage room as instructed.

1.5 Environmental conditions monitored and maintained

- **ventilation** - Accommodation needs to be well ventilated but not draughty and cold. Ref LO1.1
- **light** - Guinea pigs do not like well-lit sleeping areas but they like their feeding and exercise areas well lit.
- **structure** – Need to be safe and suitable for the guinea pigs; e.g. no sharp edges correct ramp angles if needed, correct sized entrances and exits.
- **temperature** – Guinea pigs can withstand wide variation in temperatures if they have adequate food and bedding. However shade may be needed in hot weather and lagging or hutch hugger required in cold
- **noise** – Most animals can get used to a variety of background noises but sudden bangs and loud noises cause stress and fright.

1.6 Keep animals safe during cleaning Learners must know their responsibility for keeping the guinea pigs safe and reducing the risks by keeping the guinea pigs in secure temporary accommodation.

1.7 Difficulties reported to the correct person in charge ref LO1.3 such as breaks, excess dirt or wetness, stressed aggressive guinea pigs.

1.8 Provide clear accurate information for recording Report procedures in the correct format for e.g. animal medicine book, animal record book, herd record, medicine record, waste disposal records, diary, to person in charge ref LO1.3 in writing or electronically.

Learning Outcome 2. Be able to work safely and minimise environmental damage

2.1 Work to maintain health and safety and animal welfare within the law and other requirements Work to maintain health and safety consistent with legislation and codes of practice and any other requirements: Know who to report to if unsure about own roles and queries as regards H & S and animal health and welfare. Ref LO1.3.Know current legislation. E.g. Animal Health Acts, Health and Safety Acts, PUWER, Know the risks relating to the animals that will be cared for, Know to take more care when caring for certain highlighted individuals or groups. e.g. one guinea pig may be more frightened and liable to bite, Use of risk assessments can be a good teaching and learning tool. Learners should be aware of the five freedoms: (Freedom from - discomfort, hunger and thirst, pain injury and disease, fear and distress, and free to show normal behaviour. To enable the livestock under your care to be content, thrive and grow well.

2.2 Work in a way that minimises environmental damage With due regard to Environmental Protection Acts, Codes of Practices as applicable e.g. Air and water. The importance of environmental issues when disposing of all categories of livestock waste products. is paramount, which as well as organic waste may include inorganic waste comprising of paper, glass, metal and plastic, which must be recycled or disposed of in the municipal bins as instructed by the person in charge. Ref LO1.3

2.3 Disposal of waste All animal waste including feed should be removed and disposed of correctly as instructed by person in charge ref LO1.3. The importance of not feeding contaminated feed and water should be highlighted and its immediate removal and disposal ref LO2.2.

LO3, LO4, LO5, LO6, are the key areas of knowledge for this unit

Learning Outcome 3. Know why it is important to maintain animal accommodation

3.1 Importance of maintaining animal accommodation correctly To provide correctly designed fit for purpose accommodation to promote health, welfare and minimise stress. Ref LO1.1

3.2 Relationship between maintaining the animal's accommodation and keeping them healthy and well Ref LO1.1 and LO3.1

3.3 Factors that can affect the maintenance of accommodation e.g. health age and behaviour With results from LO2.2 review accommodation. E.g. Lower ramp angles change height of feeders, change volume of hay in sleeping area, alter ventilation, lighting, temperature to suit the time of year so guinea pigs are content.

3.4 Signs within the accommodation that indicates its health and well-being For example animal interaction, feeding, playing and nesting habits. Ref LO1.1

Learning Outcome 4. Know how to maintain animal accommodation

4.1 Environmental conditions that promote the animals health and welfare Correct positioning and site of housing needed for all animals away from drafts, fumes, noise, and widely varying temperature and wind variations. Also Ref LO1.5

4.2 Identify the reasons for monitoring environmental conditions and reporting variations covering

- **suitability to animal** - Correct size, temperature and fit for purpose.
- **freedom of movement** - Guinea pigs really like big runs with plenty of grass
- **minimise stress** – Guinea pigs do not like loud noises and are easily frightened.
- **intended purpose length of stay** - Depending on need of animal/keeper
- **enrichment** – Guinea pigs like a variety of areas to explore also a varied diet that would include different suitable vegetables as well as proprietary feeds and water

4.3 Outline cleaning routines appropriate to

- **animal species concerned** in this case a guinea pig
- **the accommodation where they are kept** Ref LO1.1.

- **why they are housed** e.g. Permanent housing or transport Ref LO1.1. Outline frequency e.g. (weekly) and depth of removal of soiled litter, cleaning, disinfection etc, ref LO1.3 and LO1.4.

4.4 Describe cleaning methods and materials appropriate to

- **for the species concerned** Ref LO 4.3
- **the accommodation in which they are kept** Ref LO1.1
- **why they are housed** Ref LO1

4.5 Describe how to recognise signs of stress and abnormal behaviour in animals before, during and after maintaining accommodation and what actions should be taken Ref LO1.3 Detail cleaning routine logically from the start, stating need for temporary safe housing, depending on depth of cleaning operation required. Ref LO4.3

Learning Outcome 5. Know how to maintain materials and fittings

5.1 Maintaining materials and fittings to ensure health and well-being of occupants Animals need to live within the five freedoms. Accommodation needs identified and monitored to ensure no illness or injuries can occur due to faults in the equipment. To enable the guinea pigs for example to be content. All aspects listed in need identified and checked. Ref LO1.4, LO1.5, LO3.1

Learning Outcome 6. Know relevant health and safety and animal welfare legislation and environmental good practice

6.1 Current health and safety legislation, animal health and welfare, codes of practice and other requirements Ref LO **2.1**

6.2 How environmental damage can be minimised Ref LO2.2 LO2.3

6.3 Correct methods for disposing of organic and inorganic waste Ref LO2.2

Teaching Strategies And Learning Activities

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e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

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Evidence Of Achievement

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- Witness statements
- Taped evidence (video or audio)

- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion

- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
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All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The RSPCA web site www.rspca.co,uk and The pet web site www.petweb site.com The Defra web site http://www.defra.gov.uk has details of the new animal welfare acts and The Code of Recommendations for the Welfare of livestock are useful sources of information on transporting livestock.
- The Health and Safety Executive web site http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information web site http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments

- The Department for Environment, Food and Rural Affairs web site has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency web site http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc

See Skills and Education Group Awards web site for further information

Control and Restrain Animals

Unit Reference	**Y/502/1536**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**15**
Unit Summary	The aim and purpose of this unit is to provide the learner with the knowledge and skills to restrain animals. The learner will be able to assess the risks involved, identify appropriate methods of restraints and use them effectively and safely
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.2)** ***The learner can***
1. Be able to restrain animals	**1.1** Select and use a suitable method of restraint which minimises distress and injury to the animal taking into account the following factors • the behaviour and temperament of the animal • the health and well-being of the animal **1.2** Approach the animal in a manner which is likely to minimise stress **1.3** Maintain the restraint of the animal securely and safely in a manner which minimises stress

	1.4 Modify methods of restraint in response to the reactions of the animal as necessary
2. Be able to select, use and maintain relevant equipment	**2.1** Select appropriate equipment for this area of work **2.2** Use equipment according to relevant legislation and manufacturer's instructions **2.3** Prepare, maintain and store equipment in a safe and effective working condition
3. Be able to work safely	**3.1** Work in a way which maintains animal welfare and health and safety and is consistent with current legislation, codes of practice and any additional requirements **3.2** Wear the appropriate protective clothing
4. Know how to restrain animals	**4.1** State the risks to self, others and animal in restraining animals **4.2** List and describe the different methods for restraining animals **4.3** Describe the possible indicators of stress and alarm in the animals when being restrained and the ways this can be minimised **4.4** Describe how to approach animals to minimise stress and when assistance may be required to approach and/or restrain the animal and the consequences of not doing so **4.5** Describe the limits of responsibility in restraining animals and how to gain

	assistance and to whom these should be reported **4.6** Describe when it may be necessary to modify the methods of restraint for the animal **4.7** Describe animal behaviour that will indicate the animals state of temperament
5. Know relevant health and safety legislation	**5.1** Outline the current health and safety legislation, animal health and welfare, codes of practice and any additional requirements **5.2** Describe the Personal Protective Equipment that should be used when controlling and restraining animals
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment which will be required for the activity **6.2** Describe the methods of maintaining the range of equipment

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
CU2 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15/ a to l, n to r, t to w
CU45 1 to 11/ a to l
RVN5 1 to 10/ a to p
RVN6 3 to 7/ c, d, e, f, g, j

Supporting Unit Information

Y/502/1536 Control and restrain animals - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 The main example used here is the dog however any appropriate animal can be used

Learning Outcome 1. Be able to restrain animals

1.1 The reason that the dog is needing to be restrained, correctly identified minimising stress and injury; i.e. for assessment, exercise, bathing, grooming, particular health reasons e.g. examination of teeth or ears, clipping, pregnancy diagnosis, blood sampling

- the behaviour and temperament, of the dog correctly identified e.g. is it liable to run away, urinate, lick or bite ref LO4.1
- the health and well-being of the dog correctly identified, e.g. sick, young, elderly, pregnant, so no further damage is inflicted on the affected part of the dog and/or the pain inflicted does not cause the dog to object by biting or bolting.

1.2 The dog must be approached and handled appropriately for its current temperament and feelings learner calmly and quietly reading the body language of the dog, and altering the method of approach and restraint to suit the dog in question, with due regard to health and safety of self and others ref LO4.1.

1.3 Restraint method used is maintained correctly for the required procedure minimising stress keeping the dog calm and secure for the period required for the activity identified in LO 1.1.

1.4 Changes in position or restraint method being used are correctly implemented for the dogs well-being and to facilitate procedure identified in LO1.1 e.g. holding a dogs muzzle to prevent it biting when being closely examined.

Learning Outcome 2. Be able to select, use and maintain relevant equipment

2.1 Selecting appropriate equipment The procedure must be carried out in an appropriate enclosed area. E.g. correct size, good lighting, secure, well ventilated. Use of specific premises such as veterinary clinic, kennels or other specialist on site animal facilities preferably. If the dog has run away it firstly needs to be quietly guided or enticed into a suitable area, before restraining attempted.
Equipment must be chosen correctly for size and type of dog, reason of restraint chosen above e.g. dog lead, harness, muzzle, halti, pole catcher, dog bath, learners would not be expected to use all types of equipment, Ref LO6.PPE selected and safely used e.g. gloves, overalls footwear

2.2 Using equipment correctly The equipment chosen is placed on the dog correctly as per manufacturer's/supplier's/supervisor's instructions

2.3 Keep equipment in the correct manner for use Before using the equipment such as the dog lead, it is chosen correctly, e.g. size strength material, cleanliness. After use it is cleaned, any repairs or maintenance required is either completed if possible, or reported to the appropriate person. The equipment is then put away in the correct place, ready for reuse

Learning Outcome 3. Be able to work safely

3.1 Work activities carried out consistently within current legislation refer to LO5.
The dogs body language is correctly read so the restraint procedure chosen is appropriate to the dog safety, to the safety of everybody involved and to ensure there is no damage to the facilities and equipment used Ref LO4.1

3.2 Correct PPE is chosen and worn e.g. overalls, correct footwear, gloves

Learning Outcome 4. Know how to restrain animals refer to LO1

4.1 Know risks to people and animals Refer LO1. Prior to practical restraint activities it is important that learners know the risks involved to self, others animals, facilities and equipment. E.g. escaping dogs can

cause vehicle accidents, animal fights, and other animals to escape or injure themselves. Dogs may bite, scratch urinate or defecate when frightened. Completion of risk assessments prior to activity should be encouraged

4.2 Know different methods for restraining animals Refer LO2. Prior to practical restraint different equipment and methods that could be used to restrain dogs identified. This should take place in appropriate facilities e.g. veterinary clinic, kennels or other specialist on site animal facilities

Equipment and how the equipment is used identified. E.g. collars and leads, muzzles, harnesses, haltis, pole catchers

4.3 Know indications of stress and panic in animals Refer LO1.2 Recognition of stress in dogs. e.g. shaking, whining, growling, snarling, bolting, thrashing, urinating, starey or pop eyed

4.4 Know ways to minimise stress Refer LO1.3 by adapting your approach, talking quietly/sternly as appropriate. Stroking if applicable:- Knowing the blind spots and level of a dogs area of vision, and approach accordingly e.g. crouching to minimise perception of threat, only if assesses safe to do so. Ensuring the dog is correctly restrained so it knows it cannot escape

4.5 Know when, how, and who, to ask for advice, assistance, help and guidance What you can do on your own e.g. Attach collar and lead to certain identified dogs

4.6 Know how restraint methods need to be changed As either the job identified changes Ref LO1.4, or the dog being restrained, changes it attitude by for example becoming more aggressive (need for muzzle)

4.7 Recognise changes in animals behaviour Ref LO1.4 Dogs exhibit a wide variety of behavioural characteristics and handlers need to be able to read the dogs' body language correctly. E.g. is the dog happy, sad, frightened, or just being nasty and is potentially dangerous

Learning Outcome 5. Know relevant health and safety legislation

5.1 Learners need to know that this and other legislation is in place to protect them Ref LO3. and the animals under their care, but do not need to know the intricacies of the laws e.g. Legislation that relates to employment Health and Safety at Work Act (1974) and updates, COSHH (1991) and updates, Working Time Regulations (2009,) Provision and Use of Work Equipment Regulations (1998) PUWER. Legislation that relates to animals, Animal Health Act (1981) and associated acts, e.g. Animal Welfare Act 2006, Control of Dogs Order

(1992), Dangerous Dogs Act 1991), Transport of Animals order (2006), Environment Protection Acts

5.2 The correct PPE needed to be worn for the job being undertaken Ref LO3. E.g. overalls for all cleaning, handling jobs, protective gloves for handling dogs liable to bite, boots to protect feet and prevent slipping.

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 The facilities required for the tasks identified Ref LO2., veterinary clinic, kennels or other specialist on site animal facility
Equipment must be chosen correctly for reason of restraint chosen above e.g. dog lead, harness, muzzle, halti, pole catcher, dog bath Ref LO6

6.2 Equipment maintenance cleaning, lubrication repairs if necessary, cleaned, any repairs or maintenance required is either completed if possible, or reported to the appropriate person. The equipment is then put away in the correct place, ready for reuse.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The

workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2, and 3 link together and can only be assessed practically by observation. These are directly linked to the key areas of knowledge for this unit. Learning Outcomes 4, 5, and 6, the contents of which should be taught prior to restraint procedures are undertaken for safety and animal welfare reasons.

It is important that practical assessment activities are supervised appropriately

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

It is imperative that dogs are handled in appropriate handling facilities which will be found in most animal academies and kennels. Dogs can be very dangerous, even the quietest dog will bite if handled inappropriately so it is essential that all procedures are closely supervised
It is important that the learners are physically able to carry out any manual handling procedures and have had appropriate training before attempting to handle the bigger breeds of dog.

Useful web sites

- The Health and Safety Executive web site http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information web site http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The web site http://www.defra.gov.uk/ provides helpful guidance about animal welfare regulations and codes of practice
- The Dogs Trust web site http://www.dogstrust.org.uk/ provides factsheets covering laws and other facts relating to dogs

See Skills and Education Group Awards web site for further information

Provide Controlled Exercise Opportunities for Animals

Unit Reference	**K/502/1556**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills to provide controlled opportunities for animals to exercise. It is not designed to cover exercise which applies to animals that are trained for competitive purposes This unit is designed to be applicable to working with all species of animals that need to exercise
Learning Outcomes (1 to 9) ***The learner will***	**Assessment Criteria (1.1 to 9.1)** ***The learner can***
1. Be able to assess opportunities for controlled exercise	**1.1** Assess the animals suitability for exercise and their requirements **1.2** Assess that the exercise areas is as safe as possible for the animal and the controlled exercise
2. Be able to use equipment properly and safely	**2.1** Select, prepare and check appropriate equipment for exercise **2.2** Fit equipment properly for the animal and the exercise **2.3** Clean equipment after use

3. Be able to provide controlled exercise opportunities for animals	**3.1** Prepare the animals for exercise in a manner which allows them to exercise safely and to benefit from the exercise **3.2** Provide exercise opportunities which meet the requirements of the animal and its environment **3.3** Follow the correct procedures for the animal concerned to maintain health, safety and welfare of the animal • prior to exercise • during exercise • after exercise
4. Be able to work safely and minimise environmental damage	**4.1** Provide clear and accurate information for recording purposes **4.2** Work in a way which maintains health and safety and is consistent with relevant legislation animal welfare, codes of practice and any additional requirements **4.3** Maintain personal hygiene before, during and after the exercise opportunity **4.4** Maintain biosecurity measures to protect yourself, others and other animals
5. Be able to communicate with colleagues and others	**5.1** Communicate with colleagues and/or others regarding the exercise requirements and opportunities for the animal
6. Know how to provide controlled exercise opportunities to animals	**6.1** Explain the animals' needs for controlled exercise and the reasons for this and the optimum time for exercise

	6.2 Explain the requirements and benefits of controlled exercise for different animals **6.3** State how the need for exercise differs between different animals and the context in which the animal is kept according to • type • time • intensity • stage of life **6.4** Describe the reasons for providing animals with different exercise patterns and how these differ at different life stages **6.5** State why insufficient or excessive exercise is harmful to animals **6.6** Explain why some animals should not be exercised
7. Know what equipment should be used to provide controlled exercise opportunities to animals	**7.1** Give examples of different equipment that would be used for different exercise opportunities **7.2** State why it is important to ensure the correct equipment is used **7.3** State why it is important to check, clean and maintain equipment in good order for use in controlled exercise opportunities
8. Know the relevant health and safety legislation and codes of practice	**8.1** Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements affecting the provision of exercise to animals **8.2** List the factors affecting the safety of the exercise area where the animal(s) is to be exercised including

	• other people • the handler • the environment **8.3** State the reasons for accurate recording and reporting of the exercise taken
9. Know about the potential risks to animals and handlers regarding bio security and infection control	**9.1** Describe the potential risks to animals, handlers and others regarding • bio security • infection control • disease control

Mapping to National Occupational Standards
This unit is mapped to
Lantra Animal Care (V2) National Occupational standards October 2008 O29NAC4.1
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
CU2 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15/ a to l, n to r, t to w

Supporting Unit Information

K/502/1556 Provide controlled exercise opportunities for animals - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 For the purpose of this indicative content a canine will be discussed, however this should be adapted to apply to a range of species.

Learning Outcome 1. Be able to assess opportunities for controlled exercise

1.1 Assess animals suitability for exercise and their requirements
Age, species, breed, condition – health, injuries, exercise tolerance – has this been affected by clinical condition or age, natural behaviour – allow for natural behaviour to be expressed e.g. running, seeking and retrieving, controlled amounts of exercise

1.2 Assess that the exercise area is as safe as possible for the animal and the controlled exercise Secure, free from hazards – broken fencing, litter, sharp edges and objects, suitable for purpose, perform risk assessment of the area, area is controlled

Learning Outcome 2. Be able to use equipment properly and safely

2.1 Select, prepare and check appropriate equipment for exercise
Lead, collar, harness, halti, exercise toys e.g. balls, check condition of equipment to include stitching, clasps, buckles etc., security of equipment, suitability for individual and use, prevents injury, prevents

escape, allows appropriate exercise. Ensure PPE is worn – gloves, aprons

2.2 Fit equipment properly for the animal and the exercise Well fitted, not too tight/loose, releases quickly, not rubbing (leads, collars and haltis) exercise toys not broken, not able to be swallowed and choked on, don't allow entrapment of tongues

2.3 Clean equipment after use Remove debris, clean with suitable detergent, use of appropriate disinfectants, correct use of disinfectants, follow manufacturer's instructions, maintain biosecurity, prevent transmission of zoonosis, maintain quality of equipment

Learning Outcome 3. Be able to provide controlled exercise opportunities for animals

3.1 Prepare the animals for exercise in a manner which allows them to exercise safely and to benefit from the exercise Assess the animal's health, fit suitable equipment on the animal, assess the individual animal's requirements, check for lameness and lethargy. Benefits include expression of normal behaviour, respiratory and cardiovascular system benefits relieve from stress and boredom, mental stimulation, improved muscle tone and joint mobility

3.2 Provide exercise opportunities which meet the requirements of the animal and its environment Suitable to the animal's age, breed, condition and exercise requirements. Mimic the animals natural exercise patterns – reduced exercise for puppies and geriatrics, giant breeds have reduced exercise requirements to prevent joint problems, is exercise limited for clinical reasons. Prevent stress boredom, expression of normal behaviour, reduced or over use of skeletal and muscular system, poor exercise tolerance, obesity, allow expression of normal toileting habits

3.3 Follow the correct procedures for the animal concerned to maintain health, safety and welfare of the animal

- **prior to exercise** – monitor animals condition, handle correctly – restrain in a suitable manner (secure and firm), ensure equipment and area is suitable and in the correct condition – allows adequate space, no hazards, prevents escape
- **during exercise** – is it tolerating the exercise or struggling/stressed, handle correctly – restrain in a suitable manner (secure and firm)
- **after exercise** - monitor animals response to exercise – stress, fear, excitement, monitor animal following exercise – is it relaxed/stressed, any injuries or collapse

Learning Outcome 4. Be able to work safely and minimise environmental damage

4.1 Provide clear and accurate information for recording purposes Animal details, exercise requirements, completion of exercise, written or electronic. Provide to supervisors, colleagues and owners

4.2 Work in a way which maintains health and safety and is consistent with relevant legislation animal welfare, codes of practice and any additional requirements Animal Welfare Act 2006, Pet Animals Act 1951, Five Freedoms, Personal Protective Equipment Regulations 2002, Control of Substances Hazardous to Health Regulations 2002, Reporting of Injuries, Diseases and Dangerous Occurrences 1995

4.3 Maintain personal hygiene before, during and after the exercise opportunity Wear appropriate personal protective equipment e.g. gloves, aprons, boots – rubber boots, steel toe capped boots, wash hands before and after handling animals

4.4 Maintain bio security measures to protect yourself, others and other animals Prevention of cross contamination, use of PPE, washing of hands, disinfecting equipment and exercise areas, minimise contact between infectious animals, maintain hygiene of the exercise area – refer to LO4.3

Learning Outcome 5. Be able to communicate with colleagues and others

5.1 Communicate with colleagues and/or others regarding the exercise requirements and opportunities for the animal – clear information, prompt communication, verbal, written, electronic – refer to LO4.1

Learning Outcome 6. Know how to provide controlled exercise opportunities to animals

6.1 Explain the animals' needs for controlled exercise and the reasons for this and the optimum time for exercise Controlled areas – secure area that enables amount and type of exercise to be limited or encouraged, controlled amount of exercise- ensure animal is exercising within its limits and requirements, dependent on species, breed, age, condition – any medical or surgical contraindications

6.2 Explain the requirements and benefits of controlled exercise for different animals - felines allows for hunting, chasing, expression of normal behaviour, health, prevention of stress, prevention of obesity –

refer to LO1.1. Canines as above. Reptiles – prevents stereotypical behaviour, regulation of metabolism

6.3 State how the need for exercise differs between different animals and the context in which the animal is kept according to, type, time, intensity, stage of life Adapt type and time to suit the varying needs – refer to LO1.1 Health – exercise restricted due to surgical/medical contraindications, exercise tolerance may be affected in geriatric animals or medical conditions. Boarding animals will require routine and familiar exercise patterns, recovering animals will need exercise patterns adapted to their needs

6.4 Describe the reasons for providing animals with different exercise patterns and how these differ at different life stages Differing requirements at different life stages to suit health, growth and development. Puppy stages require limited exercise to enable normal bone and joint development, geriatrics require reduced exercise, increased exercise requirements for working dogs

6.5 State why insufficient or excessive exercise is harmful to animals Refer to LO3

6.6 Explain why some animals should not be exercised Medical conditions e.g. cardiovascular conditions or tracheal collapse having contraindications to exercise, post-surgery recumbence, post orthopaedic surgery to allow skeletal repair

Learning Outcome 7. Know what equipment should be used to provide controlled exercise opportunities to animals

9.1 Give examples of different equipment that would be used for different exercise opportunities Refer to LO2.1

9.2 State why it is important to ensure the correct equipment is used Refer to LO2.1 and LO2.2

9.3 State why it is important to check, clean and maintain equipment in good order for use in controlled exercise opportunities Refer to LO2.3. Check for damage to the equipment to ensure it is still safe and functional. Maintain the equipment by checks, cleaning and correct storage to ensure safe and functional.

Learning Outcome 8. Know the relevant health and safety legislation and codes of practice

8.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements affecting the provision of exercise to animals Refer to LO4.1 and LO4.2

8.2 LO8.2 List the factors affecting the safety of the exercise area where the animal(s) is to be exercised including

- **other people** – ensure safety or others, access restricted
- **the handler** personal hygiene, use of PPE (gloves, boots and aprons), not at risk of injury by environment or animal
- **the environment** – environment is secure, free from hazards, maintain bio security, prevents escape

8.3 State the reasons for accurate recording and reporting of the exercise taken Communication between colleagues, owners, to enable continuous monitoring of exercise, to record type of exercise, record problems post exercise such as injury, intolerance. Refer to LO4.1

Learning Outcome 9. Know about the potential risks to animals and handlers regarding bio security and infection control

9.1 Describe the potential risks to animals, handlers and others regarding

- **bio security** – reducing the risk of disease transmission between patients or to humans, use preventative measures such as PPE, hygiene, quarantine and isolation
- **infection control** – reduce the risk of disease transmission and zoonosis, use of chemicals
- **disease control** – see above

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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Additional Information

Useful sources of reference

- The Complete Textbook of Veterinary Nursing – Victoria Aspinall
- RSPCA Web site

See Skills and Education Group Awards web site for further information

Provide Opportunities for Animals to Have Freedom to Exercise

Unit Reference	**A/502/1559**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills to provide enrichment opportunities for animals to exercise freely. It is not designed to cover exercise which applies to animals that are trained for competitive purposes This unit is designed to be applicable to working with all species of animals that need to exercise/enrichment
Learning Outcomes (1 to 11) ***The learner will***	**Assessment Criteria (1.1 to 11.1)** ***The learner can***
1. Be able to assess opportunities for animals to exercise by themselves	**1.1** Assess the animals suitability for exercise and their requirements **1.2** Assess that the exercise area and/or equipment is as safe as possible for the animal and the controlled exercise
2. Be able to use equipment properly and safely	**2.1** Select, prepare and check the environment equipment and materials for animals to exercise for themselves

3. Be able to move animal safely	**3.1** Move the animal to exercise area appropriately and safely according to • animal • self • environment
4. Be able to provide natural exercise opportunities for animals	**4.1** Prepare the animals and the environment for exercise in a manner which allows them to exercise safely and to benefit from the exercise **4.2** Provide opportunities for animals to exercise by themselves and exhibit natural behaviour which meet the requirements of the animal and its environment **4.3** Follow the correct procedures for the animal concerned to maintain health, safety and well-being of the animal • prior to exercise • during exercise • after exercise
5. Be able to work safely and minimise environmental damage	**5.1** Work in a way which maintains health and safety, animal welfare and is consistent with relevant legislation, codes of practice and any additional requirements **5.2** Wear appropriate Personal Protective Equipment for the animal and the environment **5.3** Maintain personal hygiene before, during and after the exercise opportunity **5.4** Maintain bio security measures to protect yourself, others and other animals

6. Be able to communicate with colleagues and others	**6.1** Communicate with colleagues and/or others regarding the exercise requirements and opportunities for the animal **6.2** Make correct reports of exercise activity promptly to the appropriate people
7. Be able to review exercise opportunity	**7.1** Review the exercise opportunity /environment enrichment to see how it meets the animals requirements **7.2** Make adjustments to exercise opportunity/environmental enrichment as necessary
8. Know how to provide exercise opportunities to animals	**8.1** Describe the animals' natural behaviour and how opportunities can be replicated **8.2** State how the need for exercise and environmental enrichment differs between different animals and the context in which the animal is kept including their expression of natural behaviour **8.3** Describe the reasons for providing animals with different exercise patterns and/or enrichment opportunities and how these differ at different stages of life **8.4** State why and when you may consider changing the exercise or enrichment opportunity **8.5** Describe how to recognise negative responses to exercise and environment enrichment and what you should do in different situations **8.6** Describe how the lack of enrichment opportunities will cause problems in animals

9. Know what equipment should be used to provide controlled exercise opportunities to animals	**9.1** Give examples of different equipment that would be used for different exercise opportunities **9.2** State why it is important to ensure the correct equipment is used **9.3** State why it is important to check, clean and maintain equipment in good order for use in controlled exercise opportunities
10. Know the relevant health and safety legislation and environment good practice	**10.1** Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements **10.2** List factors affecting the safety of the exercise area, where the animal is to be exercised including and others including • other people • the handler • the environment • equipment and material for the animal(s) **10.3** State the reasons for accurate recording and reporting of the exercise taken and enrichment activities
11. Know the potential risks to animals and handlers regarding bio security and infection control	**11.1** Describe the potential risks to animals, handlers and others regarding • bio security • infection control • disease control

Mapping to National Occupational Standards
This unit is mapped to
Lantra Animal Care (V2) National Occupational standards October 2008 O29NAC4.1

Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
CU2 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15/ a to l, n to r, t to w

Supporting Unit Information

A/502/1559 Provide opportunities for animals to have freedom to exercise
- Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Note 3 For the purpose of this indicative content a canine will be discussed, however this should be adapted to apply to a range of species

Learning Outcome 1. Be able to assess opportunities for animals to exercise by themselves

1.1 Assess the animals suitability for exercise and their requirements Age – restricted for young to enable skeletal development, restricted for geriatric due to exercise tolerance , species, breed – restricted for giant breeds due to skeletal development, condition – contraindications due to medical or surgical conditions, exercise tolerance – due to health or age, natural behaviour. Check for signs of stress, lameness, fear, collapse, breathing difficulties, excitement.

1.2 Assess that the exercise area is as safe as possible for the animal and the controlled exercise Secure, free from hazards, suitable for purpose, perform risk assessment of the area

Learning Outcome 2. Be able to use equipment properly and safely

2.1 Select, prepare and check the environment equipment and materials for animals to exercise for themselves Leads, collars,

halters, harnesses, toys, enclosures, open spaces, PPE – gloves, aprons, boots.

- Select -suitable for purpose, does it allow suitable exercise opportunity, suitable for species/breed – size, design
- Prepare – ensure clean, safe and functional
- Check – hazards, broken clasps, sharp catches, worn material, check for escape risks, disease transmission

Learning Outcome 3. Be able to move animal safely

3.1 Move the animal to exercise area appropriately and safely according to

- animal – control direction, secure methods of transport e.g. lead and collar, vehicles (caged), harnesses, transport boxes, prevent injury and escape
- self – prevent injury
- environment – prevent escape, prevent damage to area Refer to LO2.1

Learning Outcome 4. Be able to provide natural exercise opportunities for animals

4.1 Prepare the animals for exercise in a manner which allows them to exercise safely and to benefit from the exercise Assess the animals health, fit suitable equipment on the animal(refer to LO2.1), assess the individual animals requirements

4.2 Provide opportunities for animals to exercise by themselves and exhibit natural behaviour which meet the requirements of the animal and its environment Suitable to the animal's age, breed, species condition and exercise requirements. Mimic the animals natural exercise patterns, allow for behaviour such as stalking, chasing, hiding, burying. For example enable Springer Spaniels to retrieve, search and swim.

4.3 Follow the correct procedures for the animal concerned to maintain health, safety and well-being of the animal

- prior to exercise – ensure equipment and area is in the correct condition – refer to LO2.1, monitor animals condition, handle animal correctly – e.g. appropriate method, firmly and securely.
- during exercise – see above, monitor animals response to exercise
- after exercise – see above, monitor animal following exercise

Learning Outcome 5. Be able to work safely and minimise environmental damage

5.1 Work in a way which maintains health and safety, animal welfare and is consistent with relevant legislation, codes of practice and any additional requirements Animal Welfare Act 2006, Pet Animals Act 1951, Five Freedoms, Personal Protective Equipment Regulations 2002, Control of Substances Hazardous to Health Regulations 2002, Reporting of Injuries, Diseases and Dangerous Occurrences 1995. Complete and review risk assessments

5.2 Wear appropriate Personal protective Equipment for the animal and the environment Gloves, aprons, boots – rubber, steel toe capped

5.3 Maintain personal hygiene before, during and after the exercise opportunity Wear appropriate personal protective equipment, wash hands before and after handling animals

5.4 Maintain bio security measures to protect yourself, others and other animals Prevention of cross contamination, use of PPE refer to LO5.2, washing of hands – refer to LO5.3, disinfecting equipment and exercise areas, minimise contact between infectious animals, maintain hygiene of the exercise area

Learning Outcome 6. Be able to communicate with colleagues and others

6.1 Communicate with colleagues and/or others regarding the exercise requirements and opportunities for the animal Clear information, prompt communication, verbal, written, electronic, communicate with colleagues, owners, carers, supervisors, volunteers

6.2 Make correct reports of exercise activity promptly to the appropriate people Communicate with colleagues/owners, record following establishment protocols, type of exercise, duration of exercise, animal's response to exercise. Written, verbal and electronic

Learning Outcome 7. Be able to review exercise opportunity

9.1 Review the exercise opportunity /environment enrichment to see how it meets the animals requirements Breed – smaller breeds may require more exercise than giant breeds due to joint/skeletal issues, larger breeds may require more space, age – consider variations between puppies, adults and geriatrics – allow little and often for geriatrics, condition – consider health status, natural behaviour – running, chasing, seeking and retrieving

9.2 Make adjustments to exercise opportunity/environmental enrichment as necessary Adjust to ensure that it meets the animals requirements and any changes at review e.g. change in animal condition, change in exercise requirements, more or less stimulation required.

Learning Outcome 8. Know how to provide exercise opportunities to animals

8.1 Describe the animals' natural behaviour and how opportunities can be replicated – refer to LO4.2. Adapt routine and environment to replicate their natural environment and exercise pattern

8.2 State how the need for exercise and environmental enrichment differs between different animals and the context in which the animal is kept including their expression of natural behaviour Refer to LO4.2 Allow variation between individuals. Monitor individuals and devise exercise opportunities according to their individual requirements

8.3 Describe the reasons for providing animals with different exercise patterns and/or enrichment opportunities and how these differ at different stages of life Changes in exercise tolerance may vary through juvenile adult and geriatric life stages, changes in physical capabilities due to age, health and condition, mental stimulation and variation to keep the animal stimulated and the exercise stimulating, mimicking of natural exercise patterns

8.4 State why and when you may consider changing the exercise or enrichment opportunity Changes in animal condition, changes in life stage, variation, routinely to prevent boredom and stereotypical behaviour, seasonal in some species. Review exercise at regular intervals and change when it is no longer proving effective

8.5 Describe how to recognise negative responses to exercise and environment enrichment and what you should do in different situations Stereotypical behaviour – pacing, barking, chasing tail, injury, signs of stress , self-mutilation – excess licking and grooming, chewing areas of the body, changes in temperament – aggression or depression, change in health status, report to appropriate personal, review exercise requirements and methods

8.6 Describe how the lack of enrichment opportunities will cause problems in animals Prevents expression of natural behaviour and instinct, boredom, lack of mental stimulation, stereotypical behaviours, stress and reduced health. Refer to LO4.2

Learning Outcome 9. Know what equipment should be used to provide controlled exercise opportunities to animals

9.1 Give examples of different equipment that would be used for different exercise opportunities Refer to LO2.1. Leads, collars, halters for controlled, restrained exercise. Toys for un restrained exercise

9.2 State why it is important to ensure the correct equipment is used Appropriate for use, prevent injury, prevent escape, allow appropriate exercise

9.3 State why it is important to check, clean and maintain equipment in good order for use in controlled exercise opportunities Maintain bio security, prevent injury, prevent transmission of zoonosis, prevent escape, maintain quality of equipment

Learning Outcome 10. Know the relevant health and safety legislation and environment good practice

10.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements- refer to LO5.1

10.2 List factors affecting the safety of the exercise area, where the animal is to be exercised including and others including

- other people – hygiene, maintaining bio security, preventing zoonosis and injury
- the handler – as above, equipment enables suitable control and restraint
- the environment – see other people, security of area, prevention of escape
- equipment and material for the animal(s) -security, hygiene, bio security, injury, escape
- Refer to LO5.2, LO5.3 and LO5.4

10.3 State the reasons for accurate recording and reporting of the exercise taken and enrichment activities communication between colleagues, owners, monitoring of animals and their exercise requirements, animals response to exercise. To review and monitor the effectiveness of exercise patterns, to enable continuation between colleagues and owners. To highlight needs for changes.

Learning Outcome 11. Know the potential risks to animals and handlers regarding bio security and infection control

11.1 Describe the potential risks to animals, handlers and others regarding

- bio security – reducing risk of disease transmission, quarantine and isolation
- infection - as above, zoonotic risks, use of chemicals and disposal of waste
- disease control – as above

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the

units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Provide Feed and Water to Animals

Unit Reference	**D/502/1473**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim and purpose of this unit is to provide the learner with the knowledge and skills required to provide feed and water to animals by selecting the correct feed and supplying clean, fresh water according to the feed plan
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.2)** ***The learner can***
1. Be able to provide feed and water to animals	**1.1** Select the correct feed according to the animals' feeding plan **1.2** Prepare feed correctly and hygienically **1.3** Provide feed in a manner which gives each animal the opportunity to obtain its food and maintains it's health and welfare **1.4** Supply clean, fresh water to the animals according to their needs **1.5** Provide clear and accurate information for recording purposes

2. Be able to select, use and maintain relevant equipment	**2.1** Select appropriate equipment for this area of work **2.2** Prepare, maintain and store equipment in a safe and effective working condition
3. Be able to work safely	**3.1** Work in a way which maintains health and safety, animal welfare and is consistent with current legislation, codes of practice and any additional requirements **3.2** Dispose of waste safely and correctly
4. Know how to provide feed and water to animals	**4.1** Describe the purpose of a feeding plan **4.2** Describe different types of feed and feed quality for 3 different purposes **4.3** Outline the importance of providing fresh water to animals **4.4** Describe normal feeding and drinking behaviour of animals and how to identify signs of abnormality **4.5** Outline correct storage and use of equipment and feedstuffs **4.6** Describe potential difficulties and risks that may arise during the feeding process and who to report them to **4.7** Identify the types of records required and explain the importance of accurate record keeping
5. Know relevant health and safety legislation	

	5.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements **5.2** Describe the correct methods for disposing of waste
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment which will be required for the activity **6.2** Describe the methods of cleaning and maintaining the range of equipment hygienically

Mapping to National Occupational Standards
This unit is mapped to
Lantra Animal Care (V2) National Occupational standards October 2008 O29NCU33
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
AUX5 1 to 8/ c, e, g
CU2 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15/ a to l, n to r, t to w

Supporting Unit Information

D/502/1473 Provide feed and water to animals – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 2 The examples used here are cats however any appropriate species or mixture of species can be used

Note 3 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

LO1, LO2 LO3 are the key areas of competence for this unit.

Learning Outcome 1. Be able to provide feed and water to animals

1.1 Select the correct feed in accordance to animals' feeding plan
Follow feeding plan for animals to be fed, Use plan provided to identify amount and type of feed required which could be fresh, frozen, dried, or tinned

1.2 Prepare feed correctly and hygienically. Follow standard operating procedure, prepare by washing hands and selecting correct PPE, use clean tools and equipment to measure and dispense food into correct containers for animals concerned. Report mistakes in feeding plans, breakages and defects to line manager, who could be section manager, small holder, pet owner, vet, keeper, or teacher. All opened containers labelled for specific animals if not emptied sealed and labelled, to ensure no cross contamination, miss feeding, and stored in safe place such as fridge for perishable foods or sealed containers for dried and other foods.

1.3 Provide feed in a manner which gives each animal the opportunity to obtain its food and maintains its health and

welfare Ensure cats have own bowls cleaned and returned with correct feed allocation as feeding plan with no distractions e.g. dogs, other cats etc. All cats in room fed at the same time if possible to prevent stress and give them time to eat. Especially with young animals feeding plan may be little and often to increase feed intake and keep them fit

1.4 Supply clean, fresh water to the animals according to their needs Water provided ad lib unless otherwise directed e.g. before an operation. Water bowls kept topped up, clean and hygienic throughout to help encourage uptake. Beware topping up dirty containers

1.5 Provide clear and accurate information for recording purposes Follow work place standard operating procedures for recording and providing information for example - hospitalisation records with name of animal, date of arrival, expected time of operation, type of food and water required, amount and whether eaten, time of withholding of food prior to operation, change of diet and time required for post operation food and water or information on hypo-allergenic or weight loss/gain diets

Learning Outcome 2. Be able to select, use and maintain relevant equipment

2.1 Select appropriate equipment for this area of work. Equipment for personal use selected footwear, gloves, apron, etc. Equipment for handling and preparing food e.g. tin opener, fork, spoon, bowls and weigh scales. Ensure any electrical equipment (fridge, freezer, kettles) used is safe, pat tested and correctly maintained. Equipment for feeding cat; water bowls and feed bowls clean and fit for purpose. Note bowls must be wide enough to let cat put head into bowl without touching whiskers. None slip bases also useful.

2.2 Prepare, maintain and store equipment in the correct way Clean all tools and equipment before and after process so ready for reuse. Do not clean with human feeding utensils. Ensure temperature safe but high enough to remove bacteria. Do not use highly scented detergents on feed bowls as it can deter cats from eating. Check all equipment and materials are clean and in good working order before and after use. Report breakages and defects to line manager, ref. LO1.2. Store cupboards temperature regulated, preferably out of direct sunlight. All opened containers labelled for specific animals. Tinned food removed from tins placed in air tight containers and labelled, before refrigeration.

Learning Outcome 3. Be able to work safely

3.1 Work healthily and safely with regard to animal welfare codes of practice and other requirements minimising environmental damage Work safely according to current legislation with due regard to animal health and welfare e.g. Animal Health Acts, Health and Safety, PUWER, Environmental Protection Acts, Codes of Practices as applicable, risk assessment and any other additional requirements. Learners do not need to know the intricacies of these laws but they do need to know basic safety requirements, cleanliness, and feed preparation requirements.

3.2 Dispose of waste safely and correctly Animal waste including feed should be removed and disposed of correctly as instructed, following standard operating procedures. The disposal of all categories of animal feed waste and water, disposed of in accordance to environmental legislation, in municipal waste bins, sinks or specifically allocated containers or dirty water system. The importance of not feeding contaminated feeds and water should be highlighted

LO4, LO5 and LO6 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to provide feed and water for animals

4.1 Describe the purpose of a feeding plan. To prevent illness from underfeeding and over feeding, feeding the correct foods at the correct times. To enable a written record which enables different people to follow plan and feed correctly, to enable analysis of feed intake to diagnosis illness, incidents of weight gain or loss, changes in behaviour. To prevent gorging and sickness, and to prevent wastage. Ref LO1.1

4.2 Describe different types of feed and feed quality for 3 different purposes. Examples could be freshly caught prey if plentiful caught by cat provides all a cat needs to keep healthy Cats like to kill and eat their own prey e.g. insects rodents, birds, reptiles**.** Tinned food can be useful to help a cat regain lost body condition especially more expensive brands e.g. kittens up to 12 weeks need 5 small meals of tinned food a day. Elderly cat getting tooth problems need soft tinned food, fed to appetite one to two times a day. Dried food contains minimal water so water must be provided at all times, good for cats' teeth, and good for cats where it may be impossible to feed the regularly e.g. pressures of work as it does not go off as quickly as fresh and tinned foods

Examples of different uses of different feed types could be special diets

for cats with diarrhoea and or colitis, or hypo-allergenic diets as prescribed by vets. Post and pre operation diets, specialist kidney diets. Nursing cats also need a good supply of a variety of feed and water available at all times, or fed two times a day at least

4.3 Outline the importance of providing fresh water to animals Cats' body contains about 67% water, which is approximately the percentage of water in the prey they would catch and eat in the wild. A 15% loss in water can result in death. Dry cat food is around 10% water, and canned cat food around 78%. Without the right water the cat can become ill with dehydration. Dirty water can carry infections e.g. bacteria such as Salmonella. Excess water is not a problem as the cat can expel excess in urine. Water loss can take place with bleeding, diarrhoea, increased body temp, increased salt intake and must be replaced to prevent death. Ref LO1.4

4.4 Describe normal feeding and drinking behaviour of animals and how to identify signs of abnormality Cats can vary but they are creatures of habit, variations in normal habits such as not drinking or eating, are important and can indicate illness and must be noted on feeding charts and/or reported to line manager. Ref LO1.2. Dropping of feed can indicate tooth problems as can refusal to eat dried food.

4.5 Correct storage and use of equipment and feed Ref LO2.2

4.6 Difficulties and risks during feeding and who to report them to Work with due regard to health and safety Ref LO3.1 to minimise risks. Risk assessments are useful teaching tools to highlight potential difficulties and risks when feeding all types of animals. Some cats can be very aggressive at times for example and learners need to report any issues to Line Managers. Ref LO1.2 so that warnings can be put in place to minimise the risk to all personnel. Risks to the cat due to eating too fast causing sickness or aspiration pneumonia also noted.

4.7 Types of records required and the importance of accurate records records required can vary between businesses and individual cats. Ref LO1.5. From total recorded feeding regime to a record of just feeding in some catteries. Legibility and accuracy of all records paramount as otherwise have no meaning and can cause mistakes. Records may for example be written on cards, placed in cats cage or record book, or electronic in computer recording system, or digital recording system.

Learning Outcome 5. Know relevant health and safety legislation and environmental good practice

5.1 Current health and safety legislation, codes of practice and other requirements. Ref LO3.1

5.2 Correct methods of disposing of waste and animal feed Ref LO3.2

Learning Outcome 6. Know the types of equipment and how to maintain them

6.1 Equipment required for feeding: Ref LO2.1

6.2 Methods of cleaning and maintaining equipment hygienically
Know methods of cleaning all tools and equipment before and after process so ready for reuse. Ref LO2.2

Teaching Strategies And Learning Activities

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All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

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Evidence Of Achievement

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- Witness statements
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Additional Information

Useful web sites

- The RSPCA web site www.rspca.co,uk and The pet web site www.petweb site.com The Defra web site http://www.defra.gov.uk has details of the new animal welfare acts and the Cats Protection League has useful information on cats http://www.cats.org.uk/learn/education_secondary.asp
- The Health and Safety Executive web site http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Department for Environment, Food and Rural Affairs web site has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency web site http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc

See Skills and Education Group Awards web site for further information

Principles of Companion Animal Pharmacy

Unit Reference	**A/502/7619**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**28**
Unit Summary	The purpose of this unit to provide learners with the knowledge and understanding of a veterinary pharmacy. It introduces the learner to pharmacy legislation and management; enabling them to work safely in a clinical environment. The learner will be able to support qualified members of staff to provide veterinary pharmaceutical products
Learning Outcomes (1 to 10) ***The learner will***	**Assessment Criteria (1.1 to 10.2)** ***The learner can***
1. Understand relevant Health and Safety legislation	**1.1** Identify the relevant current health and safety legislation, to include • The Health and Safety at Work Act 1974 • Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985 • Control of Substances Hazardous to Health 2002 • The Environmental Protection Act 1990 **1.2** Work within health and safety guidelines **1.3** Demonstrate health and safety procedures when handling pharmaceutical products

2. Know how to correctly dispose of pharmaceutical products and ancillary equipment	**2.1** Identify how to correctly dispose of waste pharmaceutical products in accordance with the relevant health and safety legislation **2.2** Demonstrate how to dispose of waste pharmaceutical products in accordance with the relevant health and safety legislation **2.3** Demonstrate how to dispose of waste ancillary equipment in accordance with the relevant health and safety legislation
3. Know the distribution categories of medicines in accordance with the Veterinary Medicines Regulations	**3.1** State the categories of veterinary medicines, to include • POM-V • POM-VPS • NFA-VPS • AVM-GSL **3.2** Identify who may prescribe medicines from each category
4. Know the storage requirements of medicinal products in accordance with the Veterinary Medicines Regulations	**4.1** Explain the storage requirements of: • POM-V • POM-VPS • NFA-VPS • AVM-GSL **4.2** List the measures which must be taken to ensure the safe storage of medicinal products **4.3** Identify the documentation required when storing medicinal products
5. Understand the Misuse of Drugs Act 1971	**5.1** Identify • Schedule 1 • Schedule 2

	• Schedule 3 • Schedule 4 • Schedule 5 **5.2** Identify common medicinal products which are included in schedule 1, 2, 3, 4 & 5 categories **5.3** Explain the storage requirements of medicinal products which are included in schedule 1, 2, 3, 4 & 5 categories **5.4** Explain the prescription requirements of medicinal products which are included in schedule 1, 2, 3, 4 & 5 categories
6. Be able to interpret a prescription	**6.1** Undertake the task of providing medicinal products in accordance to a given prescription **6.2** Create a label in accordance to the Veterinary Medicines Regulations
7. Be able to interpret basic dispensing abbreviations	**7.1** State the meaning of basic dispensing abbreviations, to include • a.c. • b.d (b.i.d) • o.d. • o.m. • o.n. • p.c. • p.r.n. • q.d.s. (q.i.d) • q.q.h. • stat • t.d.s. • t.i.d • s/c • i/m • i/v

8. Know who can prescribe medicinal products	**8.1** Identify the role of • SQP • MRCVS • Pharmacist **8.2** State the role of a Registered Qualified Person (RQP)
9. Understand how to assist with the administration of oral and topical medication under direction	**9.1** Describe how to assist with the administration of oral medication to include • tablets • liquids **9.2** Describe how to assist with the administration of creams and ointments **9.3** Describe how to assist with the application of powder, sprays and drops
10. Understand how to assist with calculating required tablet numbers and liquid volume	**10.1** Demonstrate how to assist with calculating the quantity of oral tablets required from a given prescription **10.2** Demonstrate how to assist with calculating the quantity of liquid volume required from a given prescription

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
RVN29 3, 4, 5, 6, 8, 9, 10, 11/ b, c, d, f, g, h, I, j, k, l, n
RVN30 4, 5, 6, 7, 8, 9, 10, 12/ b, c, d, l
RVN27 q
AUX7 2, 4, 5, 6/ b, c, d, e, g

Supporting Unit Information

A/502/7619 Principles of companion animal pharmacy - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the learning outcome (LO) and then to the assessment criteria number listed.

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Learning Outcome 1. Understand relevant Health and Safety legislation

1.1 Identify the relevant current health and safety legislation, to include

- **The Health and Safety at Work Act 1974** know employee and employer responsibilities, risk assessments, control measures, understand the role and responsibilities of the Health and Safety Executive.
- **Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985** identification of minor accidents and dangerous occurrences, how to record an accident, who to notify in the event of an accident.
- **Control of Substances Hazardous to Health 2002** warning labels, COSHH assessments, Standard Operating Procedures.
- **The Environmental Protection Act 1990** duty of care, collection, disposal or treatment of controlled waste, special waste, hazardous waste.

1.2 Work within health and safety guidelines: suitable and acceptable behavioural conduct, identification of risks and hazards, control of risks, know employee and employer responsibilities, be able to record an accident or incident, identify and accurately read warning labels, use

appropriate PPE, follow Standard Operating Procedures, correct identification and safe disposal of waste.

1.3 Demonstrate health and safety procedures when handling pharmaceutical products: correct disposal of waste - syringes, used pill pots, sharps, expired/unused drugs, correct storage of drugs/medicinal products, correct handling of pharmaceutical products, correct use of PPE. Cross reference to 1.2.

Learning Outcome 2. Know how to correctly dispose of pharmaceutical products and ancillary equipment

2.1 Identify how to correctly dispose of waste pharmaceutical products in accordance with the relevant health and safety legislation (See LO 1.1, 1.2, 1.3)

2.2 Demonstrate how to dispose of waste pharmaceutical products in accordance with the relevant health and safety legislation (See LO 1.1, 1.2, 1.3)

2.3 Demonstrate how to dispose of waste ancillary equipment in accordance with the relevant health and safety legislation (See LO 1.1, 1.2, 1.3)

Learning Outcome 3. Know the distribution categories of medicines in accordance with the Veterinary Medicines Regulations 2009

3.1 State the categories of veterinary medicines POM-V (Prescription Only Medicine – Veterinary), POM-VPS (Prescription Only Medicine – Veterinary Pharmacist Suitably Qualified Person), NFA-VPS (Non Food Producing Animal – Veterinary Pharmacist Suitably Qualified Person) and AVM-GSL (Authorised Veterinary Medicine – General Sales List). Identify common medicinal products under these categories. Detail storage and purchase requirements of each category, to include: temperature, ventilation, security, lockable cabinets, location of controlled drugs cabinet, prescription, controlled drugs prescription.

3.2 Identify who may prescribe medicines from each category Detail who may prescribe each of the following categories as detailed in 3.1, to include Veterinary Surgeon, Veterinary Nurse, Suitably Qualified Person, Pharmacist, lay person. Authorised prescribers of medicines POM-V: Veterinary Surgeon; POM-VPS: Veterinary Surgeon, Pharmacist, Suitable Qualified Person; NFA-VPS: Veterinary Surgeon, Pharmacist, Suitable Qualified Person; AVM-GSL: Veterinary Surgeon, Pharmacist, Suitable Qualified Person, veterinary nurse, lay person.

Learning Outcome 4. Know the storage requirements of medicinal products in accordance with the Veterinary Medicines Regulations 2009

4.1 Explain the storage requirements of POM-V, POM-VPS, NFA-VPS and AVM-GSL. See 3.1.

- **POM-V:** Controlled drugs – lockable cabinet, location of cabinet, security of keys. General POM – V – temperature, light, humidity, ventilation, location of storage area relation to access from the public, refrigerated products – temperature monitoring, temperature range.
- **POM-VPS:** temperature, light, humidity, ventilation, location of storage area relation to access from the public, refrigerated products – temperature monitoring, temperature range.
- **NFA-VPS:** temperature, light, humidity, ventilation, location of storage area relation to access from the public, refrigerated products – temperature monitoring, temperature range.
- **AVM-GSL:** temperature, light, humidity, ventilation, location of storage area relation to access from the public, refrigerated products – temperature monitoring, temperature range.

Know the storage of refrigerated products, detail the required temperature ranges and documentation required. Know the requirements of lockable cabinets for storage of medicinal products; position and location in the premises; know who has access to the lockable cabinet and the type of medicinal products stored within it. Location of the practice pharmacy in relation to access for the general public. Detail the storage of liquids, tablets, ointments, lotions and injectable medicines; including light sensitive items.

4.2 List the measures which must be taken to ensure the safe storage of medicinal products

- Public access – security
- Position within the premises – security, ease of access
- Position of lockable cabinets – Structural/internal wall, security, ease of access
- Storage of keys – members of staff who are allowed access to pharmacy products
- Light pollution – natural light contamination, degradation of product, temperature control
- Protection from vermin – methods used to protect from vermin, identification of evidence of vermin
- Protection from contamination and availability of PPE – sink and hand washing facilities, gloves, face mask, ventilation, coveralls.

4.3 Identify the documentation required when storing medicinal products Record of controlled drugs, purchase requests, prescriptions. Evidence of fridge temperatures and ambient pharmacy temperatures.

Learning Outcome 5. Understand the Misuse of Drugs Act 1971

5.1 Identify the medicinal categories schedule 1, 2, 3, 4 and 5.

5.2 Identify common medicinal products which are included in schedule 1, 2, 3, 4 & 5 categories.

- Schedule 1: e.g. LSD, cannabis, heroin, cocaine
- Schedule 2: e.g. morphine, fentanyl, pethadine, methadone
- Schedule 3: e.g. buprenorphine, pentobarbitone, phenobarbitone,
- Schedule 4: e.g. ketamine, butorphanol, steriods
- Schedule 5: e.g. cough mixtures

Common medicinal products are to be those which are used regularly within a veterinary practice, for example; NSAID's, analgesics, antibiotics, anthelmintics, miticides.

5.3 Explain the storage requirements of medicinal products which are included in schedule 1, 2, 3, 4 & 5 categories See LO 4.1.

5.4 Explain the prescription requirements of medicinal products which are included in schedule 1, 2, 3, 4 & 5 categories Include who may write a prescription for example veterinary surgeon, pharmacist, and suitably qualified person. Know the key differences between a purchase prescription and client prescription. Detail the requirements of a prescription, for example; details of medicine, dosage requirements, route of administration, patient details, client details, prescriber's details and qualifications.

Learning Outcome 6. Be able to interpret a prescription

6.1 Undertake the task of providing medicinal products in accordance to a given prescription: Interpret a prescription correctly; obtain the correct medicinal product to include volume, strength and preparation; correctly identify category of medicinal product and complete documentation accordance with the Misuse of Drugs Act 1971.

6.2 Create a label in accordance to the Veterinary Medicines Regulations: Identify and include legal and desirable requirements: drug, dosage, patient, client, prescribing person, date, warnings, withholding times.

Learning Outcome 7. Be able to interpret basic dispensing abbreviations

7.1 Be able to interpret basic dispensing abbreviations Understand and interpret the basic dispensing abbreviation listed.

- a.c – ante cibum (before meals)
- b.d. (b.i.d) – bis in die (twice a day)
- o.d. – occulus dexter (right eye)
- o.m. – omni mane (in the morning)
- o.n. – omni nocte (at night
- p.c. – post cibum (after meals)
- p.r.n. - pro re nata (as occasion requires)
- q.d.s. (q.i.d.) - quater in die (four times daily)
- q.q.h. – quaque hora (every hour) e.g. q.4.h – every four hours
- stat – statim (immediately)
- t.d.s. - ter die sumendum (three times daily)
- t.i.d – ter in die (three times daily)
- s/c – subcutaneous
- i/m- intramuscular
- i/v – intravenous

Learning Outcome 8. Know who can prescribe medicinal products

8.1 Identify the role of SQP, MRCVS, Pharmacist and RVN when prescribing veterinary medicinal products

- **SQP** animal health advisor, entitlement to prescribe/supply certain veterinary medicines under the Veterinary Medicines Regulations, interpretation, formulation and dispensing of prescriptions, registered with AMTRA
- **MRCVS** animal health advisor, entitlement to prescribe and supply medicines for animals under their care, Cascade System, prescription of medicines for treatative and preventative conditions, interpretation, formulation and dispensing of prescriptions.
- **Pharmacist** interpretation, formulation and dispensing of prescriptions written by an MRCVS or SQP.

Know which category of medicine can be prescribed by an SQP, MRCVS, Pharmacist and RVN.

- **SQP** POM-VPS, NFA-VPS, AVM-GSL
- **MRCVS** POM-V, POM-VPS, NFA-VPS, AVM-GSL
- **Pharmacist** POM-VPS, NFA-VPS

8.2 State the role of a Registered Qualified Person (RQP)

- **RQP –** a registered qualified person Veterinary Surgeon registered with the Royal College of Veterinary Surgeons (RCVS) or a pharmacist registered with the Royal Pharmaceutical Society of Great Britain (RPSGB)

Learning Outcome 9. Understand how to administer oral and topical medication under direction

9.1 Describe how to assist with the administration of oral medication to include, tablets and liquids How to restrain patients, to include a range of species; feline, canine, lagomorph. Manual restraint techniques - towels, cat sack, holding the animals head, techniques to open the animals mouth, identify suitability of restraint methods to support animal welfare. Safe administration of oral medications, prevention of aspiration. Preparation patient, equipment and medicines prior to administration. Use of PPE – gloves, mask, coverall.

9.2 Describe how to assist with the administration of creams and ointments: See LO 9.1. Prevention of patient interference and consumption. Safe application and use of PPE (cross reference to 9.1). Safe restraint of patients, to include a range of species; feline, canine, lagomorph (cross reference to 9.1).

9.3 Describe how to assist with the application of powder, sprays and drops: Prevention of patient interference and consumption. Safe application and use of PPE (cross reference to 9.1). Safe restraint of patients, to include a range of species; feline, canine, lagomorph (cross reference to 9.1).

Learning Outcome 10. Be able to assist with calculating required tablet numbers and liquid volume

10.1 Demonstrate how to assist with calculating the quantity of oral tablets required from a given prescription. Basic drug calculations: weight of patient, strength of drug, frequency of treatment e.g. A 10kg dog requires 25mg twice daily for 5 days. Tablets are available as 250 mgs. 10kg x 25 mg = 250mg. 1 250mg twice daily for 5 days = 10 tablets

10.2 Demonstrate how to assist with calculating the quantity of liquid volume required from a given prescription. Basic drug calculations: weight of patient, strength of drug, frequency of treatment. Type of liquid: solution, suspension e.g. a 5kg cat requires 3mls suspension for 10 days. 3 x 10 = 30mls

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence

- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Principles of Infection Control for Animal Nursing Assistants

Unit Reference	**M/502/7620**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**25**
Unit Summary	This purpose of this unit is to provide the learner with the knowledge and understanding of infectious organisms and how these cause clinical disease in animals. The unit focuses the importance of how to prevent the spread of infection, to maintain asepsis and sterility in the clinical environment. The learner will be able to correctly use disinfectants and apply them to the working environment safely
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.4)** ***The learner can***
1.Understand the importance of disinfection in the control of infection	**1.1** Explain what disinfection is and how it is used in a clinical environment **1.2** Identify the limitations and usage of disinfectants
2. Understand the principals of sterilisation	**2.1** Explain what sterilisation is and how it is used in a clinical environment **2.2** Identify two methods of sterilisation

	2.3 Identify the suitability of items for sterilisation
3. Be able to use antiseptics and disinfectants	**3.1** List the commonly used antiseptics and disinfectants in veterinary practice **3.2** Demonstrate the safe use of disinfectants **3.3** Demonstrate the safe storage of disinfectant **3.4** Identify the factors which affect the efficacy of disinfectants
4. Know how to maintain clinical environments	**4.1** Describe the methods used to maintain clinical environments to include • animal accommodation • clinical environment • waiting room • consulting room • theatre **4.2** Describe how to maintain clinical environments during a contagious outbreak **4.3** Describe how to maintain clinical environment during a zoonotic outbreak
5. Understand the importance of personal hygiene	**5.1** Explain and/or demonstrate appropriate personal hygiene techniques to be used in a clinical practice
6. Understand how to maintain hand hygiene	**6.1** Explain and demonstrate how to use alcohol hand gels effectively **6.2** Demonstrate the safe use of antiseptic solutions

	6.3 Demonstrate the WHO six step hand disinfection technique
7. Understand how to dispose of veterinary waste to prevent infection	**7.1** State how to dispose of infected waste **7.2** Identify the key implications of clinical waste regulations for clinical practice **7.3** Describe how to handle contaminated waste **7.4** Explain how to store and dispose of cadavers

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
AC3 1 to 14/ a to k
RVN3 1 to 13/ a to s
RVN6 9/ h
RVN9 17/ d to g
RVN27 q
CU2 8/ o

Supporting Unit Information

M/502/7620 Principles of infection control for animal nursing assistants - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the assessment criteria number listed 1.1

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Understand the importance of disinfection in the control of infection

1.1 Explain what disinfection is and how it is used in a clinical environment Detail the basic principles of cleaning and disinfection – cleaning of common areas within the veterinary practice to include; kennels, theatre, preparation area, laboratory, waiting rooms, and consultation rooms. Definition of disinfection – killing of pathogenic micro-organisms. Removal of organic material and debris – physical and chemical removal. Use of surfactants concentration, use of and safety precautions; common terminology related to disinfection e.g. pathogen, bacteriostatic, bacteriocidal, fungicidal, virucidal, asepsis. Different locations within the veterinary practice, likelihood of challenge and the importance of cleanliness and disinfection e.g. waiting room, consultation room, preparation room, theatre suite and kennels. Importance of preventing nosocomial infections; common nosocomial infections - MRSA, Salmonella and enterococci. Methods to reduce pathogenic organisms including personnel; personal hygiene, PPE, use of hand gels, environmental; fomites, kennels, runs and patient; personal hygiene, PPE, cleaning of excretions, correct treatment and hospitalisation of patient. Environmental and skin disinfection – antisepsis, disinfection, use of agents on the skin. Importance of

asepsis and patient hygiene. Detail commonly used environmental and skin disinfectants used in the clinical environment; environment – halogen, phenol, QAC, aldehydes; skin – chlorhexadine, povidone iodine, alcohol solutions. Potential side effects and reactions to disinfectant solutions; human and animal species – skin sensitivity, chemical burns, ingestion, respiratory effects. Related legislation governing the use of chemical agents e.g. COSHH & HSAWA. Know the limitations and precautions when using chemical disinfectants – over and under dosage, pathogen susceptibility, safety of personnel and animals. Safe preparation and use of chemical disinfectants – storage, use of PPE, ventilation, spillage, correct dilution rates.

1.2 Identify the limitations and usage of disinfectants: See LO 1.1. Environmental challenge and type of pathogen - cross ref LO1.1, presence of organic material, inactivating substances/materials e.g. wood, wool, bedding. User compliance – correct dilution of product cross ref LO1.1. Effective removal of organic material – cross ref LO1.1. Suitability of disinfectant – cross ref LO1.1. Safe preparation and use of disinfectants - cross ref LO1.1. Correct use of Personal Protective Equipment – use of gloves, masks, protective clothing.
Actions to be taken in event of contamination/ingestion and accidental spillage – cross ref LO1.1. Safe storage of disinfectants – containers, labelling, light and heat contamination. Toxicity of disinfectants to susceptible species and tissue types – skin disinfection/environmental disinfection, cross ref LO1.1. Mode of action of disinfectant in relation to organism and resultant efficacy. Contact time for commonly used environmental and skin disinfectants – in accordance with manufacturers instructions.

Learning Outcome 2. Understand the principals of sterilisation

2.1 Explain what sterilisation is and how it is used in a clinical environment: Definition of sterilisation – destruction of all pathogenic micro-organisms including fungal spores. Difference between sterilisation (destruction of all pathogenic micro-organisms including fungal spores) and disinfection (destruction of pathogenic micro-organisms) and asepsis (absence of living micro-organisms on tissue). Reasons for sterilisation: include the prevention of the spread of infection. Use of sterile equipment within the surgical setting e.g. surgical instruments, sterile drapes, sterile suture materials, needles, gowns, gloves and ancillary equipment – prevention of spread of infection, handing surgical instruments, common contaminants of equipment (surgical technique, infection, poor handling). Use of sterile

equipment for administration of medications; parenteral medications – sterile hypodermic needles and syringes. Use of sterile equipment in laboratory diagnostics – pipettes, hypodermic needles and syringes, swabs, biochemistry and haematology equipment. Wound care, patient care e.g. urinary catheters, endotracheal tubes, intravenous catheters, use of PPE, use of sterile equipment. Packaging of items to be sterilised by different methods – peel and seal bags, nylon bags, Bowie Dick indicator tape. Indication of sterilisation efficacy, to include: TST strips, bowie dick indicator strips, peel and seal bags. Duration and expiry date of single and double packed items.

2.2 Identify two methods of sterilisation: Range of knowledge of sterilisation methods to include: steam under pressure, liquid chemical sterilisation, gas sterilisation, hot air ovens. Identify the advantages and disadvantages to each method; including cost and efficacy, time, safety for personnel. Identify the health and safety requirements and implications of each method – heat, steam, chemical contamination (respiratory and skin contamination), ventilation. Commonly used methods in the clinical environment – chemical sterilisation and steam under pressure.

2.3 Identify the suitability of items for sterilisation: Methods of sterilisation and appropriateness of equipment for that method e.g. plastics, surgical stainless steel, materials (drapes/gowns), fine instruments. Diagnostic equipment, to include; endoscopes

Learning Outcome 3. Use antiseptics and disinfectants

3.1 List the commonly used antiseptics and disinfectants in veterinary practice Common groups of disinfectant agents available Cross ref LO 1.1 & 1.2. Advantages and disadvantages to each group of chemical agent – efficacy, mode of action, safety, duration of action, inactivating agents - Cross ref LO 1.1 & 1.2. Differences between skin and environmental disinfectants Cross ref LO 1.1, 1.2, 2.1. Inactivating agents or substrates/materials Cross ref LO 1.1, 1.2, 2.1.

3.2 Demonstrate the safe use of disinfectants Safe handling, constitution and use of disinfectants in accordance with the manufacturer's instructions. Correct concentration of chemical agent and water ratio. Concentration and product suitable to environment and challenge presented, to include; pathogens requiring longer contact time or stronger concentration. Actions to be taken in the event of spillage or contamination of self or animal – remove from source of contamination, wash immediately in plentiful volume of water, obtain

product data sheet, professional health advice, reporting of spillage or contamination to relevant senior staff, cleaning of spillage.

3.3 Demonstrate the safe storage of disinfectant Storing in accordance to the manufacturer's directions, to include; location, prevention of spillage, stock levels, vermin, light contamination, clear identification of product (labels).

3.4 Identify the factors which affect the efficacy of disinfectants See LO 2.3/3.1/3.2.

- Organic material – bedding, hair, urine, faeces, vomit, saliva, wound excretions
- Contact time – long/short
- Environmental challenge –organic material, volume of usage (personnel/animals), temperature, light, ventilation,
- Light – contamination of product being stored by light
- Temperature – high/low water and environmental temperature
- Concentration – weak or strong solutions
- Hard/soft water – reduction in efficacy

Learning Outcome 4. Know how to maintain clinical environments

4.4 Describe the methods used to maintain clinical environments to include

- **animal accommodation** Bedding types – vet bed, orthopaedic, blankets, paper, foam, training pads/incontinence sheets; Cage types including construction material (i.e. stainless steel, acrylic, wood, wire); Drainage – positioning of kennels, floor drainage; Cleaning protocols including frequency of cleaning, infectious animals/isolation, disposal of waste, ventilation and use of detergents Cross ref LO1.1, 1.2. Suitable disinfectants for kennels, cattery, exotic accommodation. Pathogen challenge and presence of organic material Cross ref LO1.1, 1.2
- **clinical environment** Furniture – tables, chairs, shelving, trolleys, work surfaces; damp dusting – before surgery; Cleaning protocols – Cross ref LO 1.1, 1.2; Suitable disinfectants; Drainage – floor drainage; Cleaning protocols including frequency of cleaning – cross ref LO1.1, 1.2; Removal of organic waste – cross ref LO1.1,1.2; Disposal of waste – clinical waste, domestic waste, special waste; Ventilation – passive/active system and use of detergents - surfactant. Pathogen challenge – likelihood of breakdown or disinfectant efficacy.
- **waiting room** Drainage, furniture, cleaning protocols including frequency of cleaning, infectious animals, disposal of waste,

ventilation, presence of organic material and use of detergents. Pathogen challenge. Cross ref LO1.1,1.2,4.1

- **consulting room** Drainage, furniture, cleaning protocols including frequency of cleaning, infectious animals, disposal of waste, ventilation, presence of organic material and use of detergents. Pathogen challenge. Cross ref LO 1.1,1.2.4.1
- **theatre** Furniture, damp dusting, cleaning protocols, suitable disinfectants, drainage, cleaning protocols including frequency of cleaning, removal of organic waste, disposal of waste, ventilation and use of detergents. Pathogen challenge. Cross ref LO 1.1,1.2, 4.1

4.5 Describe how to maintain clinical environments during a contagious outbreak Client and patient contamination, staff contamination, furniture and environmental contamination. Warning symbols. Staff education. Client and patient susceptibility. Use of Personal Protective Equipment - Cross ref LO 1.2. Cleaning and disinfectant protocols. Susceptibility of pathogen to chemical disinfectants or sterilisants. Prevention of contagious outbreaks.

4.6 Describe how to maintain clinical environment during a zoonotic outbreak Patient susceptibility, client susceptibility and staff susceptibility. Cleaning protocols, to include; frequency of cleaning, disinfectant use. Disposal of waste products, to include; contaminated bedding, fomites, cleaning utensils, clothing/PPE. Barrier nursing, to include; patient allocation, foot baths, shoes covers, boots/wellies, gowns, gloves, face masks and hats. Isolation unit and nursing. Standard Operating Procedures (SOP) of an isolation unit/facility.

Learning Outcome 5. Understand the importance of personal hygiene

5.1 Explain and/or demonstrate appropriate personal hygiene techniques to be used in a clinical practice: See LO 4.3. Use of PPE see LO1.2, to include the use of gloves, hand gels, uniform, footwear, hats, face masks; suitability of jewellery; length of nails, to include nail varnish; length of hair safely tied/fastened.

Learning Outcome 6. Understand how to maintain hand hygiene

6.1 Explain and demonstrate how to use alcohol hand gels effectively: In accordance with the World Health Organisation hand disinfection technique. Limitations and efficacy of hand gel use and user compliance.

6.2 Demonstrate the safe use of antiseptic solutions: Use antiseptic solutions at the correct concentration/dilution rate – in accordance to

manufacturers product instructions. Correct use of solution on varying tissues types – in accordance to manufacturers product instructions. Safe application and use of antiseptic solutions - in accordance to manufacturers product instructions.

6.3 Demonstrate the WHO six step hand disinfection technique: See LO 6.1.

1) Palm to palm

2) Right palm over left dorsum and left palm over right dorsum

3) Palm to palm fingers interlaced

4) Backs of fingers to opposing palms with fingers interlocked

5) Rotational rubbing of right thumb, clasped in left palm, then vice versa

6) Rotational rubbing, backwards and forwards with clasped fingers of hand in left palm and vice versa

Learning Outcome 7. Understand how to dispose of veterinary waste to prevent infection

7.1 State how to dispose of infected waste In accordance with the Environmental Protection Act and Disposal of Waste Regulations. Common sources of infected waste. Correct use of PPE Cross ref LO 1.2. Disposal receptacles/bags. Identification of infected/contaminated waste. Incineration/ landfill.

7.2 Identify the key implications of clinical waste regulations for clinical practice Safety of personnel and public, prosecution under the current Environmental Protection Act and Disposal of Waste Regulations. Waste collection and storage prior to disposal or incineration.

7.3 Describe how to handle contaminated waste See LO 7.2. Safe use of PPE Cross ref LO 1.2, Safe collection and storage prior to collection in accordance to the current and relevant legislation – correct bag (yellow/black), frozen storage.

7.4 Explain how to store and dispose of cadavers Use of collection/storage bags. Requirements of different registered disposal companies. Individual and private cremation animals. Use of refrigerators / freezers. Temperature monitoring. Burial and incineration of animals. Exemptions of animals from the human food chain - use of phenylbutazone. Identification documents and procedures used in clinical practice. Requirements of current waste regulations.

Teaching Strategies And Learning Activities

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Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

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All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

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Evidence Of Achievement

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- Oral/written questions and answers
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- Worksheets/job sheets/workbooks
- Witness statements
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- Photographic evidence
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Additional Information

See Skills and Education Group Awards web site for further information

Exotic Animal Anatomy and Physiology

Unit Reference	**T/502/7621**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The purpose of this unit is to provide the learner with the knowledge and understanding of anatomy and physiology of a range of common exotic animal species. The learner will be able to describe and identify common anatomical landmarks using the correct terminology and understand how the system functions normally. Learners will develop their knowledge of how husbandry systems affect an animal's well-being
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.1)** ***The learner can***
1. Know tissue structure and shape of exotic species	**1.1** Identify a basic tissue cell **1.2** Identify the key purpose and function of each of the following • muscular tissue • epithelial tissue • nervous tissue • connective tissue
2. Know the major body cavities of exotic species	**2.1** Describe the key purpose, function and location of fundamental body cavities in lagomorph, avian and reptile species

	2.2 Identify the major organs and structures within the thoracic cavity **2.3** Identify the major organs and structures within the abdominal cavity
3. Know the skeletal structure of exotic species	**3.1** Outline the basic skeletal structure of • lagomorph • avian • reptile **3.2** Identify one common condition that may affect the skeletal structure of an exotic species
4. Understand the implications of exotic species' anatomy and physiology for nursing practice	**4.1** Identify the common muscles which are used for intramuscular injection **4.2** Locate a suitable site for an intramuscular injection on a • lagomorph • avian • reptile **4.3** Locate a suitable site for venepuncture site on a • lagomorph • avian • reptile **4.4** Select three factors and explain how they affect an exotics circulation **4.5**
5. Know differences in the digestive and excretory systems of exotic species	**5.1** Identify key features of the digestive and excretory systems of • lagomorph • avian • reptile

	5.2 Explain how these features impact upon the excretions produced by each **5.3** Describe 'normal' excretions produced by each species **5.4** Identify key indicators/characteristics of abnormal excretions **5.5** Explain the role of coprophagia in exotic species
6. Know differences in the respiratory systems of exotic species	**6.1** Identify key features of the respiratory systems of • lagomorph • avian • reptile **6.2** Identify normal respiratory patterns and three factors that affect respiratory function in • lagomorph • avian • reptile
7. Be able to use appropriate terminology when describing exotic anatomy and physiology	**7.1** Employ appropriate terminology when describing the anatomical and physiological features of exotic species.
Mapping to National Occupational Standards No Mapping	

Supporting Unit Information

T/502/7621 Exotic animal anatomy and physiology - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 The exotic animal species used in this example is the rabbit.

LO1, LO2, LO3, LO4, LO5, and LO6 are outcomes of knowledge

Learning Outcome 1. Know tissue structure and shape of exotic species

1.1 Identify a basic tissue cell - Nucleus, cytoplasm, cell membrane, mitochondria, rough endoplasmic reticulum, smooth endoplasmic reticulum, ribosomes, centrosome, lysosomes, Golgi body. Round in shape.

1.2 Identify the key purpose and function of each of the following

- **Epithelial tissue** - Single or layered sheets of epithelial cells. Covers inner and outer surfaces of the body. A single layer is referred to as simple and layered is referred to as stratified. Cells are classified by their shape – cuboidal is cube shaped, squamous is flattened, and columnar is tall and column shaped. Simple squamous is a single sheet of flat cells. Found at sites of diffusion such as alveoli and blood vessels. Simple cuboidal lines glands and ducts such as kidney tubules. Simple columnar lines the intestines and allows absorption of nutrients. Ciliated epithelium has hair like projections called cilia on its surface. Lines cavities where things need to be moved such as the respiratory tract. Stratified epithelium is a series of layers which are

tough and provide protection at sites of friction. Transitional epithelium found where structures need to stretch such as the bladder. Glandular epithelium contains secretory cells, which secrete material into spaces or cavities.

- **Muscular tissue** is either skeletal, smooth or cardiac. Skeletal is attached to the skeleton and assists with locomotion. It is voluntarily controlled by the brain. Cells are cylindrically shaped and are called muscle fibres. The fibres are arranged in bundles. Smooth muscle is located throughout the body in areas such as the oesophagus and bladder. Spindle shaped cells which are arranged in sheets or bundles. Smooth muscle is under involuntary control. **Nervous tissue** consists of neurons. Neurons are composed of a cell body and nucleus, dendrites and dendrons and an axon
- **Connective tissue** can be loose, dense, cartilage, bone and blood. Loose tissue is located beneath the skin, connecting organs and between spaces. Contains fibroblasts and macrophages, collagen and elastic fibres. Adipose tissue contains many fat cells. Dense is found in tendons and ligaments. Tendons contain collagen fibres and ligaments elastic fibres. Cartilage is a matrix of chondrin, chondrocytes and collagen fibres. No blood supply. There are three types of cartilage Hyaline, Elastic and Fibrocartilage.
  Blood is found within the circulatory system and contains erythrocytes, leucocytes, platelets and plasma**.**

Learning Outcome 2. Know the major body cavities of exotic species

2.1 Describe the key purpose, function and location of fundamental body cavities

- **thoracic cavity** located cranially. Enclosed by the ribs. Its boundaries are the thoracic inlet, the diaphragm, thoracic vertebrae, sternum, ribs and intercostal muscles. Divided into right and left pleural cavities by the mediastinum. Contains the lungs and the heart.
- **abdominal cavity** located caudally. Its boundaries are the diaphragm, the pelvic inlet, lumbar vertebrae, ventral abdominal muscle and lateral abdominal muscle. Contains the abdominal organs to include liver, spleen, stomach, pancreas, intestines, bladder and reproductive organs and kidneys.

2.2 Identify the major organs and structures within the thoracic cavity - oesophagus, trachea, heart and lungs.

2.3 Identify the major organs and structures within the abdominal cavity - spleen, liver, pancreas, gall bladder, stomach, intestines, kidneys, bladder and reproductive organs

Learning Outcome 3. Know the skeletal structure of exotic species

3.1 Outline the basic skeletal structure of

- **Lagomorph** axial and appendicular skeleton, dentition and number of digits
- **Avian** keel bone, pelvis, skull, quadrate bone, cranio-facial hinge, wings, beak, legs and feet
- **Reptile** skull (including jaw and joints), dentition, vertebrae, ribs and vestigial limbs

3.2 Identify one common condition that may affect the skeletal structure of an exotic species metabolic bone disease, vitamin D deficiency, hypovitaminosis A, thiamine deficiency arthritis, osteophytes/bone spurs, genetic splay leg, iodine deficiency

Learning Outcome 4. Understand the implications of exotic species' anatomy and physiology for nursing practice

4.1 Identify the common muscles which are used for intramuscular injection - quadriceps, dorsal lumbar (epaxial)

4.2 Locate a suitable site for an intramuscular injection on a

- **lagomorph** see LO4.1
- **avian** pectoral muscles and quadriceps
- **reptile** epaxial muscles

4.3 Locate a suitable site for venepuncture site on

- **lagomorph** marginal ear vein, jugular, cephalic and saphenous
- **avian** brachial, medial metatarsal vein, ulnar vein
- **reptile** ventral tail vein, jugular, ventral abdominal vein, cardiac, dorsal coccygeal, brachial

4.4 Select three factors and explain how they affect an exotics circulation

- exercise – raised heart rate
- stress – raised heart rate
- health and disease – can raise or lower heart rate according to condition. May also cause weakness and abnormal rhythm
- anaesthesia – lowered heart rate, sinus arrhythmia
- sedation – lowered heart rate
- environment – may raise or lower heart rate depending on environmental conditions

Learning Outcome 5. Know differences in the digestive and excretory systems of exotic species

5.1 Identify key features of the digestive and excretory systems of

- **lagomorph** - rabbit is a herbivore. Oral cavity is longer and narrower than a dogs. Dentition are open rooted. Do not possess canine teeth. Digestive system is longer than the canines to allow for the digestion of plant material. Developed cardiac and pyloric sphincters making rabbits unable to vomit. Duodenum, Jejunum and ileum are very long. The ileum ends in the caecum. The caecum is the largest organ in the rabbits abdomen. Rabbits are coprophagic. Structure of rabbit kidneys varies with the species of rabbit and their environment. Desert species have large kidneys and alpine species have smaller. Urine produced is thicker and creamier than other species due to excretion of calcium.
- **avian** - beak instead of teeth. Small immobile tongues (except parrots who have large fleshy tongues). Have many salivary glands. Oesophagus sits on the right side of the neck and ends into a diverticulum called the crop. Used for food storage. Seed eaters have large crops. Stomach is divided into two sections as opposed to the canine 3. This is the proventriculus and a gizzard. The gizzard grinds up the seeds. Large intestine has two blind ended caeca. Have a cloaca which has three sections. Coprodeum receives faeces, urodeum receives kidney discharge and linked with reproductive tract, proctodeum collects and stores the discharges.
- **reptile** – species dependant. Snake - carnivorous. Possess 6 rows of teeth, fused to the mandible and continuously replaced. Have a forked tongue to allow for taste and is linked with the Jacobsons organ. They have an elongated stomach and short intestines. Possess a cloaca.

5.2 Explain how these features impact upon the excretions produced by each See Lagomorph. Also birds and reptiles - nitrogenous waste is excreted as uric acid and urates. Waste materials are suspended within the water of the urine rather than dissolving, therefore semi solid urine leaves the kidneys. The ureters take this to the cloaca where it passes by retro peristalsis into the large intestine. Here more water is absorbed.

5.3 Describe 'normal' excretions produced by each species see LO5.1 and LO5.2

5.4 Identify key indicators/characteristics of abnormal excretions abnormal colour, volume, smells and consistency

5.5 Explain the role of coprophagia in exotic species Rabbits normal faeces first leaves the anus as soft, mucous covered pellets (caecotrophs). These are eaten by the rabbit (coprophagia). By passing through the stomach twice nutrients produced by microbial fermentation are then digested.

Learning Outcome 6. Know differences in the respiratory systems of exotic species

6.1 Identify key features of the respiratory systems of

- **lagomorph -** location and function of the nares/nasal cavity. The role of the nasopharynx in respiration, the larynx, the trachea, the bronchi and bronchioles – explain how they enter the lungs and divide down into the respiratory or terminal bronchioles, the alveolar ducts, the alveolar sac and the alveoli, the lungs and the diaphragm including how it plays its part in respiration and what other factors control respiration.
- **avian -** smaller size of the lungs, the air sacs and the unidirectional flow of air allowing more oxygen to be available
- **reptile – snake -** difference in the structure of the glottis and its capacity to extend outside of the mouth during the consumption of large meals. The vestigial or rudimentary left lung and the absence of a diaphragm

6.2 Identify normal respiratory patterns and three factors that affect respiratory function in

- **lagomorph** - exercise, stress, fever, and humidity – 35 – 60 bpm
- **avian** – exercise, stress, parasites, iodine deficiency – species dependant. Budgie 55-75 bpm
- **reptile** - exercise, stress, humidity, respiratory disease – species dependant and temperature dependant.

LO7 is the competence outcome

Learning Outcome 7. Be able to use appropriate terminology when describing exotic anatomy and physiology

7.1 Employ appropriate terminology when describing the anatomical and physiological features of exotic species

- Dorsal – towards the back surface
- Ventral – towards the under surface
- Cranial – towards the head
- Caudal – towards the tail
- Proximal – towards the centre/body

- Distal – furthest away
- Medial – towards the midline
- Lateral – towards the sides
- Tachypnoea – increased respiration
- Bradypnoea – decreased respiration
- Dyspnoea – difficulty breathing
- Apnoea – cessation of breathing
- Tachycardia – increased heart rate
- Bradycardia – decreased heart rate
- Pyrexia – increased temperature

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Companion Animal Anatomy and Physiology

Unit Reference	**A/502/7622**
Level	**2**
Credit Value	**5**
Guided Learning Hours	**38**
Unit Summary	This unit aims to give the learner an introduction to the anatomy and physiology of companion animals. Learners will be given the knowledge to describe the structure and function of the major body systems. This unit will also provide learners with the correct terminology to employ when describing animal anatomy and physiology **Please note that this unit will include assessment by externally set questions which will be internally assessed and externally moderated**
Learning Outcomes (1 to 9) ***The learner will***	**Assessment Criteria (1.1 to 9.1)** ***The learner can***
1. Know the cardiovascular system of companion animal species	**1.1** Outline the major structures of the heart **1.2** Describe the function of each **1.3** Identify the key differences between arteries, veins and capillaries **1.4** Locate the main vessels used in venepuncture and pulse taking on a feline and a canine

	1.5 Describe the role of the cardiovascular system in felines and canines **1.6** Describe the circulatory system
2. Know the major body cavities of companion animal species	**2.1** Describe the key purpose, function and location of fundamental body cavities in companion animal species **2.2** Identify the major organs and structures within the thoracic cavity **2.3** Identify the major organs and structures within the abdominal cavity
3. Know the skeletal structure of companion animal species	**3.1** Identify the location of named key bones within each of the following areas of a companion animal species • axial • appendicular • splanchnic regions
4. Know tissue structure and shape of companion animal species	**4.1** Describe basic cell shape and structure **4.2** Specify the classification structure of tissues **4.3** Compare and contrast the characteristics and purpose of two tissue types
5. Know the digestive and excretory systems of companion animal species	**5.1** Identify the major structures of the digestive systems of felines and canines **5.2** Describe the function of each major structure **5.3** Describe the process of digestion in felines and canines

	5.4 Identify the major structures of the urinary system in felines and canines **5.5** Describe the function of each major structure **5.6** Outline the role of the urinary system in felines and canines **5.7** Describe the normal urinary output for felines and canines
6. Know the respiratory systems of companion animal species	**6.1** Identify key structures of the respiratory systems of felines and canines **6.2** Explain the function of each major structure (physiology) **6.3** Identify normal respiratory patterns and three factors that affect respiratory function in felines and canines **6.4** Outline the role of the respiratory system in felines and canines
7. Be able to use appropriate terminology when describing companion animal species' anatomy and physiology	**7.1** Employ appropriate terminology when describing the anatomical and physiological features of companion animal species
8. Know the types and effects of the endocrine glands	**8.1** Name the eight main endocrine glands **8.2** State the hormones secreted by each of these glands

	8.3 Describe the effect of each of these hormones on the target organ or gland
9. Know the components of the nervous system	**9.1** List the main components of the nervous system
Mapping to National Occupational Standards No mapping	

Supporting Unit Information

A/502/7622 Companion animal anatomy and physiology – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 For the purpose of this indicative content a canine will be discussed, however this should be adapted to apply to a range of species

Learning Outcome 1. Know the cardiovascular system of companion animal species

1.1 Outline the major structures of the heart Pericardium, epicardium, myocardium, endocardium, atria, ventricles, atrio-ventricular valves, semilunar valves, papillary muscles, chordae tendinae, septum, vena cava, pulmonary artery, pulmonary vein, aorta, coronary vessels

1.2 Describe the function of each

- pericardium – closed sac around the heart
- epicardium – outer surface of the heart
- myocardium – muscular wall of the heart
- endocardium – lines the inner walls of the heart
- atria – collecting chambers
- ventricle – pumping chambers
- atrio-ventricular valves – separates atria and ventricles to prevent back flow
- semilunar valves – prevent back flow into the ventricles
- papillary muscles – holds the chordae tendinae
- chordae tendinae – anchor the atrioventricular valves
- septum – separates right and left sides

- vena cava – takes blood from the body into the right atrium
- pulmonary artery – takes blood to the lungs
- pulmonary vein – returns blood from lungs to left atrium
- aorta – takes blood around the body
- coronary vessels – supplies the heart with its own blood supply

1.3 Identify the key differences between arteries, veins and capillaries –
- arteries – oxygenated blood, carry blood away from the heart
- veins – deoxygenated blood, carry blood towards the heart
- capillaries – thin walled, link arteries to veins, carry either oxygenated or deoxygenated blood

1.4 Locate the main vessels used in venepuncture and pulse taking on a feline and a canine
- venepuncture – jugular, cephalic, saphenous
- pulse – femoral, carpal, sub-lingual, coccygeal, carotid, brachial

1.5 Describe the role of the cardiovascular system in felines and canines Transport oxygen and carbon dioxide, transport nutrients and waste products, transports hormones and enzymes, maintains homeostasis

1.6 Describe the circulatory system discuss the major components structure and function
- blood – erythrocytes, leucocytes. Transport oxygen, nutrients and waste. Immune system
- vessels – capillaries, veins and arteries
- link between the circulatory system and the lymphatic system
- describe the cycle of blood flow around the body

Learning Outcome 2. Know the major body cavities in companion animal species

2.1 Describe the key purpose, function and location of fundamental body cavities in companion animal species
- thorax – protects, maintains thoracic pressure
- abdomen – protects and lubricates
- pelvic cavity – protects and maintains skeletal structure

2.2 Identify the major organs and structures within the thoracic cavity – heart, lungs, portions of oesophagus and trachea, pleural cavity

2.3 Identify the major organs and structures within the abdominal cavity – small and large intestines, liver, spleen, kidneys, bladder, uterus (females), peritoneum, peritoneal cavity, mesentery.

Learning Outcome 3. Know the skeletal structure of companion animal species

3.1 Identify the location of named key bones within each of the following areas of a companion animal species

- axial – skull, vertebral column, ribs, sternum
- appendicular – fore limbs (inc scapula), hind limbs(inc pelvis)
- splanchnic regions – bones within soft tissue e.g. os penis

Learning Outcome 4. Know tissue structure and shape of companion animal species

4.1 Describe basic cell shape and structure Nucleus, cytoplasm, cell membrane, mitochondria, rough endoplasmic reticulum, smooth endoplasmic reticulum, ribosomes, centrosome, lysosomes, Golgi body. Round in shape.

4.2 Specify the classification structure of tissues Muscular, epithelial, connective, nervous

4.3 Compare and contrast the characteristics and purpose of two tissue types – refer to refer to LO4.2

- muscular – striated, skeletal or cardiac. Long, thin muscle fibres. Causes an action through contraction and relaxation
- epithelial tissue – simple or compound. Main function is protection and absorption in some locations.
- connective tissue – loose, dense, blood, cartilage and bone. Supports, connects tissues, and acts as a transport system.

Learning Outcome 5. Know the digestive and excretory systems of companion animal species

5.1 Identify the major structures of the digestive systems of felines and canines Oral cavity, salivary glands, pharynx, oesophagus, stomach, small intestine, pancreas, gall bladder, liver, large intestine (to include caecum, colon and rectum)

5.2 Describe the function of each major structure

- oral cavity – mastication, creating a bolus
- salivary glands – lubricating the food, first stage of chemical digestion
- pharynx – area of throat before oesophagus, initiates swallowing
- oesophagus – transports food from the oral cavity to the stomach
- stomach – chemical digestion, mechanical digestion, stores food to control rate of food passing to small intestine
- small intestine – chemical digestion, absorption of digested products

- pancreas – releases pancreatic juice containing digestive enzymes into the duodenum
- gall bladder – stores bile, expels bile through the bile duct
- liver – metabolises products of digestion, synthesises protein, detoxification, vitamin storage
- large intestine (to include caecum, colon, rectum and anus) – reabsorption of water and electrolytes, stores waste, excretes waste

5.3 Describe the process of digestion in felines and canines – refer to LO5.2

5.4 Identify the major structures of the urinary system in felines and canines – kidneys, ureters, bladder, urethra

5.5 Describe the function of each major structure

- kidneys – filter the blood (nephrons), allows for selective reabsorption of water and electrolytes, produces urine
- ureters – carry urine from the kidneys to the bladder
- bladder – stores urine
- urethra – carries urine from the bladder to the outside of the body

5.6 Outline the role of the urinary system in felines and canines – filters the blood, excretes waste, reabsorbs required water and electrolytes

5.7 Describe the normal urinary output for felines and canines – 1-2mls/kg/hr

Learning Outcome 6. Know the respiratory systems of companion animal species

6.1 Identify key structures of the respiratory systems of felines and canines – nasal cavity, pharynx, larynx, trachea, bronchi, bronchioles, alveolar ducts and alveoli, lungs, diaphragm

6.2 Explain the function of each major structure (physiology) –

- nasal cavity – moistens and warms air, filters the air
- pharynx – shared between respiratory and digestive system
- larynx – connects the upper and lower respiratory tracts, controls rate of inspired gases, prevents entry of solids into the trachea
- trachea – takes inspired air to the lungs
- bronchi – branch from the trachea, one entering each lung
- bronchioles – branch from the bronchi taking inspired air to the alveolar ducts
- alveolar ducts and alveoli – site of gaseous exchange
- lungs – inflate and deflate to allow intake of air

6.3 Identify normal respiratory patterns and three factors that affect respiratory function in felines and canines –

- Felines – 20-30 bpm
- Canines – 10 – 30 bpm
- Affected by heat, exercise, pain, fear, poison, sleep/anaesthesia/sedation, obstruction, pneumonia, pneumothorax

6.4 Outline the role of the respiratory system in felines and canines – inspire oxygen, allow gaseous exchange, expire carbon dioxide

Learning Outcome 7. Be able to use appropriate terminology when describing companion animal species anatomy & physiology

7.1 Employ appropriate terminology when describing the anatomical and physiological features of companion animal species – rostral, cranial, caudal, ventral, dorsal, medial, lateral, proximal, distal, tachycardia, bradycardia, tachypnoea, bradypnoea, dyspnoea, pyrexia, hypothermia, diphasic, cheyne stokes, anorexic, polyphagia, pica, polydipsia, polyuria, anuria, dysuria, oliguria

Learning Outcome 8. Know the types and effects of the endocrine glands

8.1 Name the eight main endocrine glands – anterior pituitary, posterior pituitary, thyroid, parathyroid, pancreas, adrenals, ovary, testes

8.2 State the hormones secreted by each of these glands

- anterior pituitary – Thyrotrophic stimulating hormone, somatotrophin, adrenocorticotrophic hormone, prolactin, follicle stimulating hormone, luteinising hormone, interstitial cell stimulating hormone
- posterior pituitary – antidiuretic hormone, oxytocin
- thyroid – thyroxin, thyrocalcitonin
- parathyroid – parathormone
- pancreas – insulin, glucagon, somatostatin
- adrenals – glucocorticoids, aldosterone, adrenaline, noradrenaline
- ovaries – oestrogen, progesterone
- testes – testosterone

8.3 Describe the effect of each of these hormones on the target organ or gland

- thyrotrophic stimulating hormone – stimulates the release of thyroid hormone
- somatotrophin – controls epiphyseal growth
- adrenocorticotrophic hormone – controls the release of adrenocortical hormones
- prolactin – stimulates the mammary glands and milk production

- follicle stimulating hormone – stimulates the development of ovarian follicles, stimulates the development of seminiferous tubules and spermatogenesis
- luteinising hormone – brings about ovulation, develops the corpus luteum
- interstitial cell stimulating hormone – stimulates secretion of testosterone
- antidiuretic hormone – affects the permeability of nephrons to water
- oxytocin – stimulates uterine contractions, produces milk "let down"
- thyroxin – controls metabolic rate
- thyrocalcitonin – decreases reabsorption of calcium from bones
- parathormone – stimulates calcium reabsorption from bones, promotes calcium uptake
- insulin – increase uptake of glucose into cells, stores excess glucose
- glucagon – breaks down glycogen
- somatostatin – prevents swings in glucose levels
- glucocorticoids – raises blood glucose, reduces inflammatory responses
- aldosterone – regulates sodium uptake
- adrenaline and noradrenaline – fear, flight or fight responses
- oestrogen – signs of oestrus, prepares for coitus
- progesterone – maintains pregnancy, prepares reproductive tract, develops mammary glands
- testosterone – spermatogenesis, male characteristics

Learning Outcome 9. Know the components of the nervous system

9.1 List the main components of the nervous system – brain, spinal cord, cranial nerves, spinal nerves, neurons

Teaching Strategies And Learning Activities

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Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

Please note that a mandatory part of the overall assessment requirements for this unit is the externally set knowledge evidence questions that will generate evidence of achievement for a number of outcomes within this unit. These are set by Skills and Education Group Awards and internally assessed and externally moderated. For further information please contact your Skills and Education Group Awards Administrator

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria including the above externally set knowledge questions.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence

- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
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- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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Additional Information

See Skills and Education Group Awards web site for further information

Companion Animal Nutrition

Unit Reference	**J/502/7624**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**18**
Unit Summary	This unit aims to provide learners with an understanding of the importance of adequate nutrition in animals. This will involve providing learners with a knowledge of the functions of nutrients and where each nutrient is sourced. They will also understand the need for nutritional support and how this is achieved
Learning Outcomes (1 to 4) ***The learner will***	**Assessment Criteria (1.1 to 4.2)** ***The learner can***
1. Know how to prepare and present food and water to animals	**1.1** Describe how to store different types of animal food **1.2** Describe how to use, clean and store feeding utensils
2. Appreciate the importance of nutrition	**2.1** Describe the functions of nutrients to include • carbohydrates • fats • protein • vitamins • minerals • water

	2.2 Identify common dietary sources of each nutrient
3. Appreciate the importance of nutritional support	**3.1** Identify two possible reasons for providing nutritional support **3.2** Describe two methods of providing nutritional support **3.3** Identify two problems associated with nutritional support
4. Know dietary requirements of animal inpatients	**4.1** Calculate the calorie requirement for two animal inpatients to include • basal energy requirements • illness energy requirements • calculating feed quantities **4.2** Propose a diet suitable for animal inpatients during/with: • convalescence • obesity • gastrointestinal conditions • critical care

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
RVN30 2, 3/ m

Supporting Unit Information

J/502/7624 Companion animal nutrition - Level 2

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Note 3 For the purpose of this indicative content a canine will be discussed, however this should be adapted to apply to a range of species

Learning Outcome 1. Know how to prepare and present food to animals

1.1 Describe how to store different types of animal food Fresh, frozen, semi-moist, dry. Storage systems- sacks, packets, bins, cupboards, refrigerators, freezers. Store away from vermin – secure containers, on shelving units, in cabinets, insects, micro-organisms, chemical contamination. Follow principles of stock rotation.

1.2 Describe how to use, clean and store feeding utensils Select equipment suitable for purpose – scoops, knifes, chopping boards, bowls and containers, clean and disinfect after use, store clean and dry and ready for use

Learning Outcome 2. Appreciate the importance of nutrition

2.1 Describe the functions of nutrients to include

- **Carbohydrates** – provide energy, regulate movement through intestines
- **Fats –** provide energy, aid absorption of fat soluble vitamins, improves palatability, provides essential fatty acids
- **Protein** – regulation of metabolism, tissue growth and repair, refer to amino acids

- **Vitamins** – assist in energy metabolism, biochemical reactions within the body
- **minerals** – maintenance of skeleton, acid-base and fluid balance, cellular function, nerve function and muscle function
- **Water** - regulates body temperature, carries nutrients, removes waste, lubricates tissues

2.2 Identify common dietary sources of each nutrient Rice, cereals, grains, vegetable oils, animal sources, meat, eggs, liver, vegetables, fruit.

Learning Outcome 3. Appreciate the importance of nutritional support

3.1 Identify two possible reasons for providing nutritional support Partial or complete anorexia for up to 3 days, acute weight loss of greater than 5-10% of bodyweight not caused by fluid loss, starvation anticipated due to surgery/diagnostic procedures, body weight 15% less than ideal, body score below optimal, recent trauma or asepsis resulting in anorexia

3.2 Describe two methods of providing nutritional support Encourage feeding, force/syringe feeding, naso-oesophageal tubes, pharyngostomy tubes, gastrostomy/PEG tubes, oesophagostomy, enterostomy, total parenteral nutrition(TPN), peripheral parenteral nutrition (PPN)

3.3 Identify two problems associated with nutritional support Vomiting, diarrhoea, over/under feeding, infection, tube obstruction, regurgitation, airway obstruction, choking

Learning Outcome 4. Know dietary requirements of animal inpatients

4.1 Calculate the calorie requirement for two animal inpatients to include

- basal energy requirements - BER <2kg = 70 x bodyweight(kg) >2kg = 30 x bodyweight (kg) + 70
- illness energy requirements - BER x illness factor
- calculating feed quantities - calculate quantity of feed using calorie density of selected feed and calculated calorie requirements

4.2 Propose a diet suitable for animal inpatients during/with

- convalescence – high protein, high calorie, concentrated, easily digestible
- obesity – high fibre, low calories, low fat
- gastrointestinal conditions – highly digestible, bland

- critical care – high protein, high calorie, concentrated, palatable

Teaching Strategies And Learning Activities

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Methods Of Assessment

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All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
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- Witness statements
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This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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Additional Information

Useful sources of reference

- Veterinary Nursing – Lane and Cooper
- The Complete Textbook of Veterinary Nursing – Victoria Aspinall
- Hill's Pet Nutrition

See Skills and Education Group Awards web site for further information

Companion Animal Parasitology and Zoonosis

Unit Reference	**L/502/7625**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**18**
Unit Summary	This unit aims to give the learner knowledge of common parasites and diseases causing organisms. The unit will develop the learners understanding of how parasites and diseases are transmitted. Learners will also understand the importance of zoonosis
Learning Outcomes (1 to 4) ***The learner will***	**Assessment Criteria (1.1 to 4.1)** ***The learner can***
1. Know organisms which can have an effect on companion animals health	**1.1** Identify two common causes of disease **1.2** Identify two common endoparasites **1.3** Identify the key presenting characteristics of endoparasitic infection **1.4** Identify two common ectoparasites **1.5** Identify the key presenting characteristics of ectoparasitic infection **1.6** Identify key preventative measures to reduce common infectious diseases in companion animals

2. Know how disease is transmitted	**2.1** Describe three routes of disease transmission **2.2** Describe and contrast direct and indirect transmission
3. Know how zoonotic disease can be prevented	**3.1** Identify three common zoonotic diseases **3.2** Identify key preventative measures to reduce the transmission of zoonotic disease
4. Understand the relevance of infection control to animal welfare and patient care	**4.1** Explain the importance of infection control to the maintenance of animal health and welfare

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
RVN7 11/ k

Supporting Unit Information

L/502/7625 Companion animal parasitology and zoonosis - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Note 3 For the purpose of this indicative content felines will be discussed, however this should be adapted to apply to a range of species

Learning Outcome 1. Know organisms which can have an effect on companion animals health

1.1 Identify two common causes of disease Bacteria, virus, fungi, protozoa, parasites

1.2 Identify 2 common endoparasites Toxocara Cati, Toxascaris Leonina, Dipylidium Caninum, Taenia species, Echinococcus granulosus

1.3 Identify the key presenting characteristics of endoparasitic infection – visible worms/eggs around anus/in faeces, polyphagia, distended abdomen, weight loss, coughing, vomiting

1.4 Identify 2 common ectoparasites Ctenocephalides, Ixodes, Felicola subrostratus, Cheyietiella, Lice, Otodectes cynotis, Notoedres cati

1.5 Identify the key presenting characteristics of ectoparasitic infection Itching, pruritus, inflammation, dermatitis, lesions, alopecia, anaemia, dandruff, scale, wax, visible signs of infestation

1.6 Identify key preventative measures to reduce common infectious diseases in companion animals Infection control –

isolation, personal hygiene, hygiene – disinfect accommodation and equipment between patients, PPE – gloves, aprons and masks, routine parasite treatment, isolation of suspected cases

Learning Outcome 2. Know how disease is transmitted

2.1 Describe three routes of disease transmission Ingestion, inhalation, direct contact, indirect contact, fomites, vectors, aerosols

2.2 Describe and contrast direct and indirect transmission Direct contact requires physical contacts, indirect requires vectors and fomites

Learning Outcome 3. Know how zoonotic disease can be prevented

3.1 Identify three common zoonotic diseases Lymes disease, Toxoplasmosis, Ringworm, Campylobacter

3.2 Identify key preventative measures to reduce the transmission of zoonotic disease Isolation – separate from other patients, provide disinfectant baths, own equipment and disposal facilities, barrier nursing, Personal protective equipment – refer to LO1.6 hygiene – environmental and personal – clean and disinfect hands, equipment and environment after use and between patients.

Learning Outcome 4. Understand the relevance of infection control to animal welfare and patient care

4.1 Explain the importance of infection control to the maintenance of animal health and welfare – prevention of disease transmission, prevent infection, aids in patient recovery

Teaching Strategies And Learning Activities

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Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion

- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Principles of Companion Animal Anaesthesia and Fluid Therapy

Unit Reference	**R/502/7626**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**24**
Unit Summary	This unit aims to provide learners with a knowledge of the basic principles of anaesthesia and fluid therapy. This will include the ability to describe the indications, equipment and monitoring of both anaesthesia and fluid therapy. Learners will not be required or expected to demonstrate these skills practically. **In accordance with the Veterinary Surgeons Act 1966 learners are not permitted to induce or maintain anaesthesia**
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.4)** ***The learner can***
1. Understand the basic principles of fluid therapy	**1.1** Identify common indications of the need for fluid therapy **1.2** Describe equipment needed for intravenous fluid therapy **1.3** Describe how to monitor fluid therapy **1.4** Identify three potential problems associated with fluid therapy

2. Appreciate basic principles of anaesthetic assistance	**2.1** Identify common indications for anaesthesia **2.2** Describe equipment needed for monitoring anaesthesia **2.3** State vital signs used to monitor anaesthesia **2.4** Identify three potential indicators of anaesthetic complications

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
RVN7 3, 5/ c, e, i
RVN16 3, 7, 8/ b, c, g, h
RVN25 2, 3/ b, c
RVN26 6/ f
RVN27 7/ f, g, h

Supporting Unit Information

R/502/7626 Principles of companion animal anaesthesia and fluid therapy - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Note 3 For the purpose of this indicative content felines will be discussed, however this should be adapted to apply to a range of species

Learning Outcome 1. Understand the basic principles of fluid therapy

1.1 Identify common indications of the need for fluid therapy Dehydration, to maintain/improve renal function, maintain fluids whilst withdrawn due to surgical/diagnostic procedures, reduction in circulatory blood volume (hypovolaemia).

1.2 Describe equipment needed for intravenous fluid therapy PPE – aprons and gloves, clippers, scissors, intravenous catheters/cannulae, Chlorhexidine/povidine-iodine scrub, surgical spirit, cotton wool, swabs, sterile blade (optional), syringe, heparinised saline, three way tap, T-piece connector, tapes, bandaging materials, fluid administration sets, fluid for infusion

1.3 Describe how to monitor fluid therapy Pulse (rate, rhythm and strength), capillary refill time, colour of mucous membranes, chest auscultation, respiratory rate and depth, core and peripheral body temperature, urine output (normal 1-2mls/kg/hr.), inflammation, swelling and redness around catheter, kinking and blocking of

administration sets and catheters, check fluid flowing, patient hydration status and body weight, soiling of bandage.

1.4 Identify three potential problems associated with fluid therapy over hydration – excess fluids provided due to inaccurate calculating or monitoring, inadequate monitoring leading to over hydration displacement or blocking of cannulae and patient interference, renal failure due to inappropriate use, hypothermia due to excess cold fluids being administered.

Learning Outcome 2. Appreciate basic principles of anaesthetic assistance

2.1 Identify common indications for anaesthesia Surgical procedures, restraint, cessation of seizures, to perform diagnostic procedures, analgesia

2.2 Describe equipment needed for monitoring anaesthesia Stethoscope, thermometer, oesophageal stethoscope, Blood pressure monitor, ECG, pulse oximeter, capnographs

2.3 State vital signs used to monitor anaesthesia Heart rate – rhythm and rate, pulse rate – rhythm, rate, pulse strength – strong or weak and thready, colour of mucous membranes – pale, cyanotic, jaundice, congested, respiratory rate, depth and pattern, body temperature – hypo or hyperthermia, cranial nerve reflexes – absence and depth, muscle tone

2.4 Identify three potential indicators of anaesthetic complications Absence of heart sounds and pulse, hyperventilation, apnoea, pale/grey mucous membranes, central eye position, absence of cranial nerve reflexes, dilated pupils, no respiratory movements, cyanosis, dyspnoea/increased respiratory effort. Problems during recovery – bradycardia, slow recovery, hypothermia, vomiting/choking, laryngeal spasms (cats), haemorrhage

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities

e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)

- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

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Additional Information

See Skills and Education Group Awards web site for further information

Plan the Handling and Restraint of Animals

Unit Reference	**R/502/1468**
Level	**3**
Credit Value	**4**
Guided Learning Hours	**26**
Unit Summary	The aim of this unit is to provide the learner with knowledge, understanding and skills to handle and restrain animals. The learner will assess the risks involved and identify appropriate methods of restraint. The unit also requires the learner to supervise others handling animals
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.2)** ***The learner can***
1. Be able to plan for handling and restraining animals	**1.1** Plan the handling and restraint of animals by identifying the reason for handling and the possible risks involved **1.2** Identify a range of suitable methods for restraining the animal and the appropriate equipment required for each method **1.3** Prepare the environment to ensure that the risks to the animal, others and themselves are minimised **1.4** Ensure that authorisation has been obtained for the animal to be handled and restrained using the method selected if required

2. Be able to handle and restrain animals	**2.1** Select a method of handling and restraint that is appropriate for the animal concerned, minimises the risks to the animal, the handler and others **2.2** Approach the animal in a manner which promotes animal welfare, minimises stress to the animal **2.3** Adapt the handling and restraint of the animal in response to its reactions and behaviour **2.4** Assess the situation and seek assistance if there is a risk to the animal, security or health and safety **2.5** Supervise others in the handling and restraint of animals **2.6** Record the handling and restraint of the animal using the correct system
3. Be able to promote health and safety and environmental good practice	**3.1** Work in a way which promotes health and safety, animal welfare and is consistent with relevant legislation, codes of practice and any additional requirements **3.2** Ensure the appropriate protective clothing and wear it correctly
4. Understand how to plan the handling and restraint of animals	**4.1** Explain how to plan the handling and restraint of animals and how to assess the risks inherent in restraining animals
5. Understand how to handle and restrain animals	**5.1** Explain why animals may require handling and restraint and how this may affect the method selected

	5.2 Describe the different methods of handling and restraining animals and the range of equipment used **5.3** Explain how to identify the possible risks and hazards involved with handling and restraint of animals and how to minimise and respond to them **5.4** Explain how animals should be approached in order to minimise stress, promote animal welfare and maintain health and safety **5.5** Explain how to recognise and assess the signs of stress and alarm in the animals being handled and restrained **5.6** Explain why it is important to work within their own limitations and experience when working with animals **5.7** Explain how to identify situations where it is not suitable for a person to approach, handle or restrain an animal without assistance and the possible consequences of doing so **5.8** Describe the types of conditions that may affect the approach, handling and restraint of animals • physical • behavioural **5.9** Explain how to supervise others in the safe handling and restraint of animals **5.10** Describe how, and from whom, to obtain the necessary authority for handling and restraining of animals and when this may be necessary

6. Understand relevant health and safety legislation	**6.1** Summarise current health and safety, animal health and welfare legislation, codes of practice and any additional requirements **6.2** Describe the range of protective clothing which may be required and the reasons for its use

Mapping to National Occupational Standards
This unit is mapped to
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
CU45 1 to 11/ a to L
CU2 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15/ a to l, n to r, t to w

Supporting Unit Information

R/502/1468 Plan the handling and restraint of animals - Level 3

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 For the purpose of this indicative content a canine will be discussed, however this should be adapted to apply to a range of species

LO1, LO2 and LO3 are outcomes of competence for this unit.

Learning Outcome 1. Be able to plan for handling and restraining animals

1.1 Plan the handling and restraint of animals by identifying the reason for handling and the possible risks involved reasons may include for examination, for treatment, grooming, assessing temperament, moving location, administration of first aid. Risks involved are injury to handler, injury to the animal, escape, disease transmission.

1.2 Identify a range of suitable methods for restraining the animal and the appropriate equipment required for each method physical restraint to include manually handling, muzzles, tape muzzles, slip lead, Halti, lead and collar, dog catcher. Chemical restraint e.g. sedation or general anaesthesia.

1.3 Prepare the environment to ensure that the risks to the animal, others and themselves are minimised ensure the environment has been disinfected to reduce disease transmission, ensure the area is escape proof, ensure equipment is ready and safe for use, ensure

lighting is adequate. Ensure area is free from hazards such as sharp objects, trip hazards, wet floors and surfaces.

1.4 Ensure that authorisation has been obtained for the animal to be handled and restrained using the method selected if required seek authorisation from owners and or supervisors. Verbally, written or electronically.

Learning Outcome 2. Be able to handle and restrain animals

2.1 Select a method of handling and restraint that is appropriate for the animal concerned, minimises the risks to the animal, the handler and others ensure the method suits the animals temperament and does not cause stress or anxiety, method provides adequate control of the animal, method ensures animal cannot injure the handler or others, and that the handler has firm control to prevent injury to the animal. Ensure the equipment used is suitable, safe and ready for use.

2.2 Approach the animal in a manner which promotes animal welfare, minimises stress to the animal approach quietly and confidently, talk to the dog using its name and reassuring tone, lower to the animals level but at a safe distance away, allow the dog to smell you, avoid cornering the dog, allow approach to be at the dogs pace.

2.3 Adapt the handling and restraint of the animal in response to its reactions and behaviour if dog becomes anxious or aggressive slow the pace, consider alternative methods of equipment, remove yourself and others to a safe distance from the animal. Allow the situation to resolve before trying new methods. Monitor the animals responses throughout.

2.4 Assess the situation and seek assistance if there is a risk to the animal, security or health and safety monitor responses to the handling. If animal responds negatively and there is risk of stress or injury to the animal, risk of escape or health and safety risks such as injury to handler and others the procedure should be stopped, the animal placed into a secure location and assistance sought from a supervisor.

2.5 Supervise others in the handling and restraint of animals allow constant, close observation without being intrusive. Monitor the handler and animals responses to the procedure.

2.6 Record the handling and restraint of the animal using the correct system record date, time, method, reason and animal responses. Recording can be done written or electronically.

Learning Outcome 3. Be able to promote health and safety and environmental good practice

3.1 Work in a way which promotes health and safety, animal welfare and is consistent with relevant legislation, codes of practice and any additional requirements Animal Welfare Act 2006, Pet Animals Act 1951, Five Freedoms, Personal Protective Equipment Regulations 2002, Control of Substances Hazardous to Health Regulations 2002, Reporting of Injuries, Diseases and Dangerous Occurrences 1995. Complete and review risk assessments

3.2 Ensure the appropriate protective clothing and wear it correctly gloves to ensure correct fit and fresh gloves between patients, aprons to cover clothing and changed between patients, steel toe capped boots if working outdoors.

LO4, LO5 and LO6 are knowledge outcomes

Learning Outcome 4. Understand how to plan the handling and restraint of animals

4.1 Explain how to plan the handling and restraint of animals and how to assess the risks inherent in restraining animals see LO1.1. Also plan the time and location and which personnel are to be involved. Ensure all that are involved are aware of the plan.

Learning Outcome 5. Understand how to handle and restrain animals

5.1 Explain why animals may require handling and restraint and how this may affect the method selected see LO1.1. Selected method needs to ensure that the reason for handling is able to be carried out.

5.2 Describe the different methods of handling and restraining animals and the range of equipment used see LO1.2

5.3 Explain how to identify the possible risks and hazards involved with handling and restraint of animals and how to minimise and respond to them see LO1.1 and LO1.3. If injury or escape occur then place animal into a secure location and seek assistance from supervisor. Apply first aid if necessary and report incident.

5.4 Explain how animals should be approached in order to minimise stress, promote animal welfare and maintain health and safety see LO2.2

5.5 Explain how to recognise and assess the signs of stress and alarm in the animals being handled and restrained signs of stress

include change in behaviour/temperament, panting, vocalisation, hyper salivation, aggression. Monitor the animal before, during and after handling for any signs.

5.6 Explain why it is important to work within their own limitations and experience when working with animals to ensure safety of the handlers, others and the animal.

5.7 Explain how to identify situations where it is not suitable for a person to approach, handle or restrain an animal without assistance and the possible consequences of doing so monitor and assess the situation. Situations are not suitable if the animal is being aggressive, it is not within their own limitations, equipment is either not suitable, damaged or not available, environment is not suitable. Consequences include injury to handler, others and animal. Escape of animal. Damage to the environment. Poor customer relations. Failure to comply with relevant legislations.

5.8 Describe the types of conditions that may affect the approach, handling and restraint of animals

- **physical** size and weight of the animal may require assistance when handling, space constraints may affect how you approach the animal, injury to the animal may affect what equipment you use and what areas of the body you can contact when restraining.
- **behavioural** aggressive animals may require more than one person to restrain the animal, different equipment may be required to ensure safety of handler, anxious animals will need to be approached slower and more at the animals own pace. Hyper excitable animals will require a calm, slow approach.

5.9 Explain how to supervise others in the safe handling and restraint of animals see LO2.5

5.10 Describe how, and from whom, to obtain the necessary authority for handling and restraining of animals and when this may be necessary see LO1.4

Learning Outcome 6. Understand relevant health and safety legislation

6.1 Summarise current health and safety, animal health and welfare legislation, codes of practice and any additional requirements see LO3.1

6.2 Describe the range of protective clothing which may be required and the reasons for its use – see LO3.2. Reasons for use are to prevent injury to the handler, prevent transmission of disease to include zoonotic disease, hygiene and cleanliness.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
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- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

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Additional Information

See Skills and Education Group Awards web site for further information

Keep Stock on Sale at Required Levels in a Retail Environment

Unit Reference	**L/503/5661**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**16**
Unit Summary	This unit assesses the occupational competence of people who work in a retail environment and who are responsible for maintaining stock levels to meet changing demand This unit requires workplace assessment of occupational competence The Retail Sector's Assessment Principles for the is available on Skillsmart Retail's web site (www.skillsmartretail.com)
Learning Outcomes (1 to 4) ***The learner will***	**Assessment Criteria (1.1 to 4.7)** ***The learner can***
1. Understand the relationship between stock levels and demand for stock	**1.1** Explain the importance of having enough stock in the store to meet demand **1.2** Describe the factors that can affect demand for stock
2. Understand the relationship between stock levels and the quality of stock on sale	**2.1** Explain how stock rotation reduces the risk that stock will become unsaleable **2.2** Describe the signs that stock is no longer saleable

3. Be able to check the level of stock on sale in a retail environment	**3.1** Calculate when to check stock levels, taking into account • expected demand for stock • the time needed to order replacement stock **3.2** Use the organisation's stock control system to assess • current stock levels • the stock levels needed • any shortfalls in stock **3.3** Describe the procedures for informing colleagues that stock needs replacing
4. Be able to replenish stock on sale in a retail environment	**4.1** Order stock as needed to maintain required levels **4.2** Prepare stock for sale within the time allowed **4.3** Arrange for stock to be moved to the sales floor as needed **4.4** Rotate stock • in accordance with organisational procedures • with the least possible disturbance to other people **4.5** Dispose of packaging waste in accordance with organisational procedures **4.6** Update the stock control system in line with organisational procedures to reflect • stock movements • any disposal of unsaleable stock **4.7** Calculate expected changes in demand and the corresponding changes that need to be made to stock levels

Mapping to National Occupational Standards

There is a one-to-one relationship with the following Retail NOS B.205, B.206

Supporting Unit Information

L/503/5661 Keep stock on sale at required levels in a retail environment – Level 2

Indicative Content

Learning Outcome 1. Understand the relationship between stock levels and demand for stock
Learning Outcome 2. Understand the relationship between stock levels and the quality of stock on sale
Know where to find minimum / maximum levels for stock on shelves to ensure

- maximum sales with minimum investment
- correct 'stock turn'
- quality maintained to protect reputation

Be aware of

- seasonal changes in requirements
- advertising campaigns
- sales history and patterns
- new technology

Learning Outcome 3. Be able to check the level of stock on sale in a retail environment
Know how to

- use Hand Held Terminals (HHT) or stock control sheets to check free stock
- check requirements at the designated times (when shop is quiet; before or after a busy trading period)
- check condition of stock (faulty item or damaged packaging)
- check 'sell by' dates (if appropriate)
- identify whether stock is a 'current line' or discontinued
- check whether or not stock has been recalled

Learning Outcome 4. Be able to replenish stock on sale in a retail environment
Know

- where to put stock
- who can deal with it

- how to adjust stock control system to account for any stock removed, written off or returned to suppliers

Know how to
- use HHT; stock records; stock control sheets and minimum / maximum information to order stock
- send orders to correct supplier at the correct time to ensure delivery of products when needed and to avoid loss of sales

Know how to display stock
- use security tags if necessary
- where to position price tickets
- remove packaging correctly
- dispose of packaging safely
- follow recycling policy
- use intelligent labelling

Know how to check requirements for stock on the shelves and move stock to the shop floor following company procedures
- timing to avoid busy sales periods
- what equipment should be used
- any arrangements to avoid safety problems on the shop floor

Know how to replenish stock
- avoid losing sales and profits and causing disruption to customers / colleagues
- monitor sales at busy times or if a product is on promotion
- identify the reason for stock levels being low or repeatedly out of stock (e.g. seasonal, inaccurate free stock figures, incorrect minimum / maximum settings)
- suggest amendments to increase stock levels and explain the reason to the relevant manager or stock control department
- rotate stock by filling shelves at the back to sell old stock first
- avoid losses due to out of date stock or stock with old style packaging that may have to be reduced to clear

Teaching Strategies And Learning Activities

The delivery of this unit needs to be closely linked with the workplace and assessment of this unit must take place in the workplace

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

It is hoped that opportunities provided by the specification will be fully used to introduce related and general / key skills studies

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff are appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching/support staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching/supporting

This unit requires workplace assessment of occupational competence. This assessment must be carried out in line with the guidance available from the Learning Provider's section of Skillsmart Retail's web site (www.skillsmartretail.com)

Specific Evidence Requirement for this unit
Simulation is not allowed for any performance evidence within this unit

Evidence Of Achievement

All learners must compile a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria. Evidence is not prescribed but may include any or all of the following*

- product evidence
- observation reports
- oral / written questions and answers

- reports / notes
- worksheets / workbooks
- witness statements
- recorded evidence (e.g. video or audio)
- photographic evidence
- case studies / assignments
- other suitable supplementary evidence
- simulation (see specific evidence requirement above)
- interview / discussion

*The most appropriate evidence for the qualification should be used

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

Evidence does not have to be written

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met

All evidence must be clearly signposted and made available for the external moderator upon request

Additional Information

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site

A copy of the following documents are available on the Skillsmart Retail web site www.skillsmartretail.com

- Retail Sector's Assessment Principles for the Qualifications and Credit Framework
- Retail Skills Evidence Requirements
- Retail Skills Unit Equivalences
- Retail Skills mapping guide for employers

Process Customer Orders for Goods in a Retail Environment

Unit Reference	**R/503/5662**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**19**
Unit Summary	This unit assesses the occupational competence of individuals responsible for processing customer orders in a retail environment This unit requires workplace assessment of occupational competence The Retail Sector's Assessment Principles for the is available on Skillsmart Retail's web site (www.skillsmartretail.com)
Learning Outcomes (1 to 5) ***The learner will***	**Assessment Criteria (1.1 to 5.4)** ***The learner can***
1. Understand the importance of customer service in relation to processing customers' orders	**1.1** Explain the importance of giving customers clear, accurate and complete information about the terms of supply **1.1** Explain the importance of keeping customers informed of the progress of their orders
2. Understand the correct use of customer information in relation to	**2.1** Describe the information that must be obtained from customers when they place orders

processing customers' orders	**2.2** Explain why information is needed from customers when they place orders, including any information that is required by law **2.3** Outline the legal and organisational requirements relating to customer confidentiality **2.4** Explain the consequences of not keeping customer information confidential
3. Be able to find out what customers want to order	**3.1** Ask questions to clarify customers' requirements **3.2** Use product information to help customers who are unsure which exact products will best meet their requirements
4. Be able to check the availability of the goods customers want to order	**4.1** Describe the available sources of supply **4.2** Check the availability of goods and the terms and conditions of supply **4.3** Offer alternative options to customers if the required goods are not currently in stock
5. Be able to process orders for customers	**5.1** Check customer identity and credit status in accordance with legal and organisational procedures **5.2** Prepare accurate and complete orders using the organisation's required format **5.3** Communicate orders to those responsible for fulfilling them in line with organisational procedures

	5.4 Maintain the requisite level of confidentiality when storing, using and sharing customer information

Mapping to National Occupational Standards
There is a one-to-one relationship with the following Retail NOS
B.207, B.208

Supporting Unit Information

R/503/5662 Process customer orders for goods in a retail environment – Level 2

Indicative Content

Learning Outcome 1. Understand the importance of customer service in relation to processing customers' orders
Learning Outcome 2. Understand the correct use of customer information in relation to processing customers' orders
Be aware of company data requirements and obligations under the Data Protection Act

- legal action and consequences of fraud if data not protected
- how data is stored by the company (locked cabinets, secure store rooms, password protected computer files), personnel authorised to access data (e.g. management, customer service staff, delivery personnel)

Learning Outcome 3. Be able to find out what customers want to order
Be able to ask relevant questions to find out customer requirements (type, size, colour, etc.)

Learning Outcome 4. Be able to check the availability of the goods customers want to order
Know how to check what is held in stock using stock control system

In order to avoid customer problems / dissatisfaction at a later date and give a positive impression, ensure that the customer is aware of all the conditions of supply and any possible problems

Be able to contact the customer and advise line manager if goods cannot be supplied

Learning Outcome 5. Be able to process orders for customers
Know how to

- use buying guides; brochure and catalogues; computer stock search facility to identify which products can be ordered and their relevant supplier

- check any minimum order quantities; small order surcharges; carriage charges; cancellation charges or delivery restrictions
- check whether the customer needs to pay in full, leave a deposit or pay on delivery
- identify the lead time for deliveries
- place an order (e.g. directly with a supplier or through the company's internal ordering system)

If goods are being supplied on credit - check supplier and bank references or use of a credit checking agency

Know what information is needed to pick and despatch the order correctly, in line with customer's expectations

- part number / description
- quantity
- colour
- size
- delivery requirements

Know what information is needed to invoice goods correctly in order to receive payment

- customer details
- terms of supply
- quantity
- unit price
- any discounts
- delivery details

Teaching Strategies And Learning Activities

The delivery of this unit needs to be closely linked with the workplace and assessment of this unit must take place in the workplace

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

It is hoped that opportunities provided by the specification will be fully used to introduce related and general / key skills studies

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff are appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching/support staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching/supporting

This unit requires workplace assessment of occupational competence. This assessment must be carried out in line with the guidance available from the Learning Provider's section of Skillsmart Retail's web site (www.skillsmartretail.com)

Specific Evidence Requirement for this unit
Simulation is not allowed for any performance evidence within this unit

Evidence Of Achievement

All learners must compile a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria. Evidence is not prescribed but may include any or all of the following*

- product evidence
- observation reports
- oral / written questions and answers
- reports / notes
- worksheets / workbooks
- witness statements
- recorded evidence (e.g. video or audio)
- photographic evidence

- case studies / assignments
- other suitable supplementary evidence
- simulation (see specific evidence requirement above)
- interview / discussion

*The most appropriate evidence for the qualification should be used

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

Evidence does not have to be written

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met

All evidence must be clearly signposted and made available for the external moderator upon request

Additional Information

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site

A copy of the following documents are available on the Skillsmart Retail web site www.skillsmartretail.com

- Retail Sector's Assessment Principles for the Qualifications and Credit Framework
- Retail Skills Evidence Requirements
- Retail Skills Unit Equivalences
- Retail Skills mapping guide for employers

Carry Out Reception Duties

Unit Reference	**M/502/1610**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**15**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out reception duties. The unit covers the important skills of welcoming and receiving people, handling enquiries and making appointments. Dealing with members of the public in a polite manner, whilst questioning them to find out what they require
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.8)** ***The learner can***
1. Be able to attend to clients enquiries and appointments	**1.1** Deal with all enquiries politely and appropriately **1.2** Identify the purpose of the enquiry accurately **1.3** Refer enquiries which cannot be dealt with promptly to the relevant person for action **1.4** Record messages and appointment details accurately and pass them to the relevant person at the right time **1.5** Give clear and accurate information to clients and colleagues

	1.6 Schedule appointments taking into account the needs of the client and the organisation **1.7** Confirm the availability of services, where necessary with relevant colleagues **1.8** Maintain confidentiality of the organisation and clients **1.9** Work in a way which promotes health and safety, is consistent with relevant legislation and codes of practice
2. Know how to attend to clients and their enquiries	**2.1** State the importance of communicating effectively **2.2** Explain the importance of taking messages, making appointments and passing them on to the right person **2.3** Outline the importance of confidentiality and procedures for handling and what may happen if it is broken **2.4** State how to ask relevant questions and identify when to refer to senior colleagues **2.5** Describe the services available, their duration and cost **2.6** Describe the appropriate use of written, verbal (face to face, telephone), non-verbal and electronic methods of communication **2.7** Identify the limits of authority when attending to people and enquiries **2.8** Describe how to recognise and respond to distressed and agitated clients

Mapping to National Occupational Standards
This unit is mapped to
Lantra Animal Care (V2) National Occupational standards October 2008
029NAC7.1,2
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
AUX1 1 to 13/ a to m
A4 2, 3, 4, 5, 6, 8, 9, 10, 11, 16/ a to e
AC7 1 to 13/ a to i

Supporting Unit Information

M/502/1610 Carry out reception duties – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Meet and Welcome Visitors

Unit Reference	**Y/601/2457**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	This unit covers the procedures to follow and hospitality to offer when meeting and welcoming visitor to business premises
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.9)** ***The learner can***
1. Understand procedures for meeting and welcoming visitors	**1.1** Describe different reasons for people visiting a business, their requirements and how their needs may be met **1.2** Explain the purpose of dealing with visitors promptly and courteously **1.3** Explain the purpose of presenting a positive image of self and the organisation **1.4** Explain the purpose of following health, safety and security procedures when dealing with visitors, including own responsibilities **1.5** Describe different types of problems that may occur with visitors including conflict and aggression

	1.6 Describe ways of dealing with different problems and when to refer to them to an appropriate colleague **1.7** Explain the purpose of communicating with visitors **1.8** Describe organisation structures and communication channels within the organisation
2. Be able to welcome visitors	**2.1** Greet visitor(s) and make them feel welcome **2.2** Identify visitors and the reason for their visit **2.3** Use the organisation's systems to receive and record visitors, as appropriate **2.4** Make sure visitors' needs are met **2.5** Present positive image of self and the organisation **2.6** Follow health, safety and security procedures, as required **2.7** Inform others of visitor's arrival, as required, in line with appropriate communication channels **2.8** Deal with any problems that may occur, or refer problems to the appropriate person **2.9** Follow procedures for departing visitors, as required
Mapping to National Occupational Standards This unit is mapped to Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010	

AUX1 1 to 9/ a to m
A4 1 to 17/ a to e

Supporting Unit Information

Y/601/2457 Meet and welcome visitors – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

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Additional Information

See Skills and Education Group Awards web site for further information

Store and Retrieve Information

Unit Reference	**R/601/2490**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**17**
Unit Summary	This unit is about storing and retrieving information securely and within confidentiality requirements of the organisation
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.6)** ***The learner can***
1. Understand processes and procedures for storing and retrieving information	**1.1** Explain the purpose of storing and retrieving information **1.2** Describe different information systems and their main features **1.3** Explain the purpose of legal and organisational requirements for the security and confidentiality of information **1.4** Explain the purpose of confirming information to be stored and retrieved **1.5** Describe ways of checking information for accuracy **1.6** Explain the purpose of checking information for accuracy

	1.7 Explain the purpose of providing information to agreed format and timescales **1.8** Describe the types of information that may be deleted **1.9** Describe problems that may occur with information systems and how to deal with them
2. Be able to store information	**2.1** Identify, confirm and collect information to be stored **2.2** Follow legal and organisational procedures for security and confidentiality of information to be stored **2.3** Store information in approved locations **2.4** Check and update stored information, if required **2.5** Delete stored information, if required **2.6** Deal with, or refer problems, if required
3. Be able to retrieve information	**3.1** Confirm and identify information to be retrieved **3.2** Follow legal and organisational procedures for security and confidentiality of information **3.3** Locate and retrieve the required information **3.4** Check and update information, if required **3.5** Provide information in the agreed format and timescale **3.6** Deal with, or refer problems if required

Mapping to National Occupational Standards
This unit is mapped to
CfA Business and Administration National Occupational Standards BAD332 Store and retrieve information
Lantra Veterinary Nursing and Auxiliary Service National Occupational Standards July 2010
CU7.2 1 to 8/ a to L

Supporting Unit Information

R/601/2490 Store and retrieve information – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

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Additional Information

See Skills and Education Group Awards web site for further information

Companion Animal Anatomy and Physiology

Unit Reference	**Y/502/7627**
Level	**3**
Credit Value	**8**
Guided Learning Hours	**60**
Unit Summary	The purpose of this unit is to provide the learner with the knowledge and understanding of anatomy and physiology of a range of companion species. The learner will be able to identify and describe the role of all the major body systems in companion animals. Learners will develop their knowledge and understanding of the link between body systems and clinical conditions
Learning Outcomes (1 to 10) ***The learner will***	**Assessment Criteria (1.1 to 10.2)** ***The learner can***
1. Know the cardiovascular system of companion animal species	**1.1** Determine the location, purpose and importance of the following within companion animal species • myocardium • left and right atria • left and right ventricles • septum • valves • major vessels **1.2** Explain the role and direction of the cardiovascular system **1.3** Describe blood vessel types

	1.4 Locate the following vessels within companion animal species • brachial artery • jugular vein • femoral artery • cephalic vein • saphenous vein • linguinal artery and vein **1.5** Determine appropriate site/s to take the pulse of a companion animal **1.6** Demonstrate how to take the pulse **1.7** Explain how a companion animal's circulation can be affected by the following • exercise • stress • health and disease • anaesthesia • sedation • environment
2. Know the lymphatic system of companion animal species	**2.1** Evaluate the role and function of the lymphatic system in relation to • immunity • circulatory system • digestive system **2.2** Determine the location, purpose and importance of the following within companion animal species • popliteal lymph node • prescapular lymph node • inguinal lymph node
3. Know the major body cavities of	

companion animal species	**3.1** Determine the location, purpose and importance of the following within companion animal species • serosa • pleura • peritoneum • pericardium • mesentery • mediastinum **3.2** Assess the significance of the mediastinum to the organs that lie within it
4. Know the skeletal structure of companion animal species	**4.1** Specify the name and location of key common flat bones within a feline and/or canine **4.2** Specify the name and location of key common irregular bones within a feline and/or canine **4.3** Specify the name and location of key short bones within a feline and/or canine **4.4** Specify the name and location of key common long bones within a feline and/or canine **4.5** Specify the name and location of key sesamoid long bones within a feline and/or canine **4.6** Explain the role of the skeletal system in a companion animal species **4.7** Locate common anatomical landmarks in a companion animal species to include • greater trochanter • tuber ischii • wing of the illium • carpus • tarsus • tuber coxae

	4.8 Explain the types of joints within the skeletal structure of a companion animal species **4.9** Explain the function of the joints **4.10** Explain the role of tendons and ligaments in the skeletal system
5. Know the digestive system of companion animal species	**5.1** Determine the location, purpose and importance of the following within companion animal species digestive system to include • oral cavity • oropharynx • oesophagus • stomach • small intestine • large intestine • anal sphincter • digestive enzymes
6. Know the urinary system of companion animal species	**6.1** Determine the location, purpose and importance of the following within companion animal species to include • kidney • ureters • bladder • urethra **6.2** Describe normal and abnormal urination in companion animal species **6.3** Describe common conditions that result in abnormal urination
7. Know differences in the respiratory systems of companion animal species	**7.1** Determine the location and purpose of each of the following in the canine/feline upper and lower respiratory system • lungs

	• pleura • diaphragm • nares • nasal cavity • nasopharynx • larynx • trachea • bronchi • bronchioles • alveoli **7.2** Determine normal respiratory rates and patterns in companion animal species **7.3** Determine abnormal respiratory rates and patterns in companion animal species **7.4** Employ appropriate veterinary terminology to describe normal and abnormal respiration **7.5** Explain how environmental and behavioural factors may affect respiration to include • temperature • humidity • exercise • stress
8. Know muscles of companion animal species	**8.1** Locate common skeletal muscles in companion animal species to include • trapezius • quadriceps femoris • biceps femoris • gastrocnemius • intercostals • diaphragm • lumber epaxials **8.2** Specify the muscles that are commonly used for intramuscular injections

9. Know the skin of companion animal species	**9.1** Describe how an animal's skin contributes to the following functions • protection • thermoregulation • production of sebum • sensory • hair **9.2** Specify the sites of subcutaneous injections
10. Identify and locate tissues illustrating structure and shape	**10.1** State the classification and structure of tissues in the body including cell types and tissue structure **10.2** Identify basic types of tissue to include • Muscular tissue • Epithelial tissue • Nervous tissue • Connective tissue
Mapping to National Occupational Standards No Mapping	

Supporting Unit Information

Y/502/7627 Companion animal anatomy and physiology - Level 3

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 The companion animal species used in this example is the canine

LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9 and LO10 are the key areas of knowledge.

Learning Outcome 1. Know the cardiovascular system of companion animal species

1.1 Determine the location, purpose and importance of the following within companion animal species

- **myocardium** muscle layer of the heart, allows the heart to contract and relax to pump blood around the body and to the lungs
- **left and right atria** top chambers of the heart found on both the left and right sides. Collects blood from either the lungs or the rest of the body before passing into the ventricles
- **left and right ventricles** found at the apex of the right and left sides of the heart. Collect the blood from the atrium before pumping the blood either to the lungs or around the body.
- **septum** located between the right and left ventricles. Separates the left and right sides of the heart.
- **valves** atrioventricular valves located between the atrium and ventricles to prevent backflow of blood from the ventricle to the atrium, pulmonary valve between the pulmonary artery and right ventricle to

prevent backflow of blood into the right ventricle and aortic valve between the aorta and left ventricle to prevent backflow of blood into the left ventricle

- **major vessels** cranial and caudal vena cava collect blood from the body and enter the right atrium to deliver deoxygenated blood to the heart. Pulmonary artery exits the heart from the right ventricle to take deoxygenated blood to the lungs to become oxygenated. Pulmonary veins take oxygenated blood from the lungs and enter the left atrium. Aorta takes oxygenated blood from the left ventricle to pump around the body.

1.2 Explain the role and direction of the cardiovascular system – role of the circulatory system is to pump blood around the body, delivering oxygen and nutrients and removing waste products. Maintains homeostasis in the body. Oxygenated blood leaves the left ventricle via the aorta. Blood is pumped around the body via a network of arteries, veins and capillaries where exchange takes place. Deoxygenated blood returns to the heart by capillaries, veins and then enters the right atrium via the cranial and caudal vena cava. Blood then leaves the right atrium into the right ventricle. The blood exits the right ventricle via the pulmonary artery to the lungs to become oxygenated.

Oxygenated blood returns to the heart via the pulmonary veins into the left atrium and then into the left ventricle.

1.3 Describe blood vessel types arteries - carry blood away from the heart (except the pulmonary artery), carry oxygenated blood, muscular walls. Veins – carries blood towards the heart, carry deoxygenated blood (except the pulmonary veins), thinner walled and less muscular than arteries, contain valves to prevent back flow of blood. Capillaries – link arteries and veins, narrow and thin walled, single layer of cells.

1.4 Locate the following vessels within companion animal species

- **brachial artery –** medial aspect of the humerus
- **jugular vein –** lateral aspect of the neck
- **femoral artery –** medial aspect of the femur
- **cephalic vein –** craniomedial aspect of the forelimb
- **saphenous vein –** lateral aspect of the hind limb, above the tarsus
- **linguinal artery and vein –** underside of the tongue

1.5 Determine appropriate site/s to take the pulse of a companion animal – lingual, femoral, digital, tarsal and coccygeal.

1.6 Demonstrate how to take the pulse – use minimal restraint. Locate the pulse using your fingers, apply slight pressure until pulse is palpable. Count the pulse for 1 minute. Record the rate.

1.7 Explain how a companion animal's circulation can be affected by the following

- **exercise –** raised heart rate
- **stress –** raised heart rate
- **health and disease –** can raise or lower heart rate according to condition. May also cause weakness and abnormal rhythm
- **anaesthesia –** lowered heart rate, sinus arrhythmia
- **sedation –** lowered heart rate
- **environment –** may raise or lower heart rate depending on environmental conditions

Learning Outcome 2. Know the lymphatic system of companion animal species

2.1 Evaluate the role and function of the lymphatic system in relation to

- **immunity –** filters out foreign material form the lymph via the lymph nodes. Produces lymphocytes. Lymph nodes are located along lymph vessels to filter the foreign materials. Lymph drains into lymphatic ducts after it has passed through a lymph node, after which it drains either into the jugular vein or cranial vena cava. Lymphatic tissues involved in the body defence system include spleen, thymus and tonsils.
- **circulatory system –** lymphatic capillaries drain excess tissue fluid from interstitial spaces and return it back to the circulation.
- **digestive system -** transports digested fats. Products of digested fat and fat soluble vitamins gets collected by lacteals situated in the intestinal villi.

2.2 Determine the location, purpose and importance of the following within companion animal species

- **popliteal lymph node –** caudal to the stifle joint.
- **prescapular lymph node –** cranial to the scapular
- **inguinal lymph node –** in the groin, between the medial aspect of the femur and the abdomen.
- When infection is present the lymph node closest to the source of infection may become enlarged. Generalised infection causes enlargement of all lymph nodes. Phagocytic cells within the lymph nodes filter out foreign material from the lymph passing through.

Learning Outcome 3. Know the major body cavities of companion animal species

3.1 Determine the location, purpose and importance of the following within companion animal species

- **Serosa –** a thin serous membrane. Lines the cavities of the body and produces a serous fluid. The fluid lubricates surfaces and allows structures to slide against each other.
- **Pleura –** serous membrane which lines the thoracic cavity. Divides the thoracic cavity into right and left sides.
- **Peritoneum –** serous membrane lining the abdominal cavity. Separates the organs within the abdominal cavity.
- **Pericardium –** a double layered membrane which encloses the heart.
- **Mesentery –** a double fold of peritoneum which supports the stomach and intestines.
- **Mediastinum –** a double layer of pleura which divides the thoracic cavity into its right and left sides.

3.2 Assess the significance of the mediastinum to the organs that lie within it the heart, aorta, oesophagus and trachea lie within the mediastinum and the lungs are situated either side of it.

Learning Outcome 4. Know the skeletal structure of companion animal species

4.1 Specify the name and location of key common flat bones within a feline and/or canine ribs located in the thoracic cavity, sternum base of the thorax, scapula proximal to the humerus, many bones within the skull, and the pelvis proximal to the femurs.

4.2 Specify the name and location of key common irregular bones within a feline and/or canine vertebrae located within the spine.

4.3 Specify the name and location of key short bones within a feline and/or canine carpals located distally of the radius and ulna, and tarsals found distally of the tibia and fibula

4.4 Specify the name and location of key common long bones within a feline and/or canine forelimb to include the humerus, radius, ulna, metacarpals and phalanges. Hind limb to include the femur, tibia, fibula, metatarsals and phalanges

4.5 Specify the name and location of key sesamoid long bones within a feline and/or canine patella running down the front of the thigh and fabellae located caudally in the stifle joint.

4.6 Explain the role of the skeletal system in a companion animal species to provide support, protection and locomotion to for the body.

4.7 Locate common anatomical landmarks in a companion animal species to include

- **Greater trochanter** proximal end of the femur
- **Tuber ischia** caudo lateral aspect of the pelvis
- **Wing of the illium** cranial aspect of the pelvis
- **Carpus** distal to the radius and ulna (forelimb)
- **Tarsus** distal to the tibia and fibula (hind limb)

4.8 Explain the types of joints within the skeletal structure of a companion animal species fibrous joints – joints formed by fibrous connective tissue, have little movement. Cartilaginous joints – joint formed by cartilage, have little or no movement. Synovial joints – have a joint cavity, contain synovial fluid, allow wide ranges of movement. Synovial joints can be further classified into plane/gliding joints, hinge joints, pivot joints, condylar joints and ball and socket joints.

4.9 Explain the function of the joints to articulate bones, allows skeletal mobility

4.10 Explain the role of tendons and ligaments in the skeletal system tendons attach muscle to bone and ligaments connect bones to bone.

Learning Outcome 5. Know the digestive system of companion animal species

5.1 Determine the location, purpose and importance of the following within companion animal species digestive system to include

- **oral cavity** external opening of the digestive tract. Allows the animal to pick up food, break food up by mastication, form bolus' of food, and lubricates the food.
- **oropharynx** area situated at the back of the oral cavity. Allows food to move from the oral cavity to the oesophagus.
- **oesophagus** muscular tube which connects the oropharynx to the stomach. Passes food to the stomach by waves of muscular contractions called peristalsis. Runs through the thorax and the diaphragm
- **stomach** situated on the left side of the cranial abdominal cavity. Functions are as a reservoir for food, breaks up food mechanically, mixes food with gastric secretions, begins the digestion of protein.
- **small intestine** long narrow tube. Divided into three sections – duodenum, jejunum and ileum. Main site of chemical digestion and absorption of nutrients.

- **large intestine** short, wide tube. Consists of the caecum, colon, rectum and anus. Functions are mainly to absorb water and store waste ready for expulsion.
- **anal sphincter** muscular ring which makes the external opening of the digestive tract. Controls the passing of faeces.
- **digestive enzymes** hydrochloric acid in the stomach aids digestion of protein, pepsinogen in gastric juice converts protein into peptides, bile salts in small intestine emulsifies fats and activates lipases, pancreatic juices and intestinal juices to aid digestion. These include trypsinogen, trypsin, lipase, amylase, maltase, sucrase, lactase, enterokinase, amino peptidases.

Learning Outcome 6. Know the urinary system of companion animal species

6.1 Determine the location, purpose and importance of the following within companion animal species to include

- **kidney –** one on each side of the cranial dorsal abdomen, cranial to the ovaries in females. Right kidney is slightly cranial to the left. The function is to filter blood, modify the filtrate and produce urine. This involves the nephrons to include the glomerular capsule, proximal convoluted tubule, loop of Henle, distal convoluted tubule and collecting ducts.
- **ureters –** narrow, muscular tube which connects the kidneys to the bladder. Urine is moved along the ureters by muscular contractions called peristalsis.
- **bladder –** caudal abdomen in the midline. Hollow organ which acts as a reservoir for urine.
- **urethra –** in females it runs from the neck of the bladder and enters the floor of the reproductive tract between the vestibule and vagina. In males it runs from the neck of the bladder, caudally through the pelvis and curves over the ischial arch where it forms the penis. The urethra carries urine from the bladder to the external opening of the body.

6.2 Describe normal and abnormal urination in companion animal species – contains water, salt and urea. Clear yellow in colour. Normal output is 1-2mls/kg/hr

6.3 Describe common conditions that result in abnormal urination – stress, behaviour problems, dehydration, renal disease, urinary tract infection, urinary crystals and stones, Diabetes Insipidus, poisoning, Addisons disease, tumours.

Learning Outcome 7. Appreciate differences in the respiratory systems of companion animal species

7.1 Determine the location and purpose of each of the following in the canine/feline upper and lower respiratory system

- **lungs** lie within the thoracic cavity, either side of the mediastinum. Divided into lobes. On the right side there are four lobes and the left side has three lobes. These are cranial (apical) lobe, middle (cardiac) lobe, caudal (diaphragmatic) lobe and the additional on the right side is the accessory lobe. The lungs are a spongy tissue which consist of air channels, blood vessels and connective tissue.
- **pleura** See LO3.1
- **diaphragm** a sheet of muscle found at the base of the thorax extended across the bottom of the rib cage. Separates the thoracic and abdominal cavity. Flattens, contracts and relaxes to increase and decrease the volume of the thoracic cavity during respiration.
- **nares** also known as the nostrils. Air enters here to pass into the nasal cavity.
- **nasal cavity** divided into left and right chambers by a cartilaginous septum. Filled with fine scrolls of bone (ethmoturbinates). Covered by ciliated epithelium. The nasal cavity warms, filters and moistens the air inhaled.
- **nasopharynx** located at the back of the throat. Conducts air from the nasal cavity to the larynx
- **larynx** lies between the mandibles after caudal to the nasopharynx. Suspended from the skull by the hyoid apparatus. The hyoid apparatus allows the larynx to swing backwards and forwards. The opening of the larynx is closed by the epiglottis during swallowing. Functions of the larynx include preventing foreign material entering the respiratory tract, regulating the inhalation of air, vocalisation.
- **trachea** permanently open tube. Situated ventrally in the neck and runs from the larynx to the bronchi. Contains incomplete C shaped rings of hyaline cartilage. Flexible. Lined with ciliated mucous epithelium which traps foreign materials. Conveys air from the larynx to the bronchi.
- **bronchi** right and left bronchi branch off from the trachea and enter the right and left lungs where they become smaller tubes called bronchioles. Convey air from the trachea to the bronchioles.
- **bronchioles** many bronchioles branch from the bronchi. Get smaller in diameter the further they branch away. They create a tree pattern

throughout the lungs called the bronchial tree. They convey air from the bronchi to the alveoli.

- **alveoli** form at the end of the bronchioles. Epithelium of the alveoli is thin and allows gaseous exchange to take place. Surrounded by capillary networks. Oxygen passes across the alveoli into the blood and carbon dioxide diffuses from the blood into the alveoli. This is the site of gaseous exchange.

7.2 Determine normal respiratory rates and patterns in companion animal species canine rate is 10 – 30 breaths per minute with a constant and steady depth and rhythm.

7.3 Determine abnormal respiratory rates and patterns in companion animal species raised or lowered than the normal rate. Shallow or deep. Abnormal rhythm.

7.4 Employ appropriate veterinary terminology to describe normal and abnormal respiration tachypnoea – increased respiration, Bradypnoea – decreased respiration. Dyspnoea – difficulty breathing, Apnoea – cessation of breathing. Cheyne Stokes – alternating deep, rapid and shallow breathing followed by apnoea. Often followed by death.

7.5 Explain how environmental and behavioural factors may affect respiration to include

- **temperature** excessive high temperatures can raise the respiratory rate
- **humidity** higher levels of humidity will result in raised respiratory rates
- **exercise** increased levels of exercise raises respiratory rates
- **stress** results in increased respiratory rates

Learning Outcome 8. Know muscles of companion animal species

8.1 Locate common skeletal muscles in companion animal species to include

- **trapezius** dorsal midline
- **quadriceps femoris** front of the thigh, origin is the ilium and femur, insertion at the tibial tuberosity
- **biceps femoris** originates at the pelvis, inserts at the tibia
- **gastrocnemius** originates caudal femur, inserts calcaneus
- **intercostals** at the ribs
- **diaphragm** see LO7.1
- **lumber epaxials** lie dorsally to the transverse processes of the vertebrae

8.2 Specify the muscles that are commonly used for intramuscular injections quadriceps femoris, lumbar epaxials and the triceps brachii

Learning Outcome 9. Know the skin of companion animal species

9.1 Describe how an animal's skin contributes to the following functions

- **protection** protects the underlying structures from physical damage from the animal and its environment. Acts as a barrier to micro-organisms. Secretion of sebum from the sebaceous glands contains antibacterial properties. Prevents the body from drying by providing a waterproof barrier. Pigments in skin and hair protects the animal from ultraviolet radiation.
- **thermoregulation** prevents heat loss by constricting surface blood capillaries, diverting the blood away from the skins surface. Erecting hairs to trap air between the body and the outer surface creating an insulating layer. Layer of adipose tissue results in insulation.
- **production of sebum** see protection
- **sensory** contains nerve endings. These detect temperature, pain and touch.
- **hair –** see thermoregulation

9.2 Specify the sites of subcutaneous injections loose skin along the dorsal surface of the animal from the back of the neck to the rump.

Learning Outcome 10. Identify and locate tissues illustrating structure and shape

10.1 State the classification and structure of tissues in the body including cell types and tissue structure

- **epithelial tissue** Single or layered sheets of epithelial cells. Covers inner and outer surfaces of the body. A single layer is referred to as simple and layered is referred to as stratified. Cells are classified by their shape – cuboidal is cube shaped, squamous is flattened, and columnar is tall and column shaped. Simple squamous is a single sheet of flat cells. Found at sites of diffusion such as alveoli and blood vessels. Simple cuboidal lines glands and ducts such as kidney tubules. Simple columnar lines the intestines and allows absorption of nutrients. Ciliated epithelium has hair like projections called cilia on its surface. Lines cavities where things need to be moved such as the respiratory tract. Stratified epithelium is a series of layers which are tough and provide protection at sites of friction. Transitional epithelium found where structures need to stretch such as the

bladder. Glandular epithelium contains secretory cells, which secrete material into spaces or cavities.

- **muscular tissue** is either skeletal, smooth or cardiac. Skeletal is attached to the skeleton and assists with locomotion. It is voluntarily controlled by the brain. Cells are cylindrically shaped and are called muscle fibres. The fibres are arranged in bundles. Smooth muscle is located throughout the body in areas such as the oesophagus and bladder. Spindle shaped cells which are arranged in sheets or bundles. Smooth muscle is under involuntary control.
- **nervous tissue** consists of neurons. Neurons are composed of a cell body and nucleus, dendrites and dendrons and an axon.
- **connective tissue** can be loose, dense, cartilage, bone and blood. Loose tissue is located beneath the skin, connecting organs and between spaces. Contains fibroblasts and macrophages, collagen and elastic fibres. Adipose tissue contains many fat cells. Dense is found in tendons and ligaments. Tendons contain collagen fibres and ligaments elastic fibres. Cartilage is a matrix of chondrin, chondrocytes and collagen fibres. No blood supply. There are three types of cartilage Hyaline, Elastic and Fibrocartilage. Blood is found within the circulatory system and contains erythrocytes, leucocytes, platelets and plasma

10.2 Identify basic types of tissue to include

- **muscular tissue** – see LO10.1
- **epithelial tissue** – see LO10.1
- **nervous tissue** – see LO10.1
- **connective tissue** – see LO10.1

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications

- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Exotic Animal Anatomy and Physiology

Unit Reference	**D/502/7628**
Level	**3**
Credit Value	**8**
Guided Learning Hours	**60**
Unit Summary	The purpose of this unit is to provide the learner with the knowledge and understanding of anatomy and physiology of a range of common exotic animal species. The learner will be able to describe and identify the major body systems within a range of exotic species. Learners will develop their knowledge of how husbandry systems affect an animal's clinical condition. Learners will be able to recognise fundamental differences between species
Learning Outcomes (1 to 11) ***The learner will***	**Assessment Criteria (1.1 to 11.2)** ***The learner can***
1. Know types and location of body tissue	**1.1** State the classification and structure of tissues in the body including cell types and tissue structure **1.2** Identify basic types tissue to include • muscular tissue • epithelial tissue • nervous tissue • connective tissue
2. Know types and location of body cavities	**2.1** Describe and identify the position of the • thoracic cavity • abdominal cavity

	2.2 Define • serosa • pleura • peritoneum • pericardium • mesentery • mediastinum and the organs within these **2.3** List the important organs within the thoracic and abdominal cavity
3. Know the basic skeletal structure and conformation of exotic species	**3.1** Identify the basic skeletal structure of the • snake • lagomorph • chelonian • bird • fish **3.2** Compare and contrast the differences between exotic species and the dog and cat **3.3** Identify the anatomical differences and locate these on a live animal **3.4** Describe the common skeletal conditions which can affect the • snake • lagomorphs • bird
4. Know the skeletal muscles	**4.1** Identify the common muscles which are used for intramuscular injections
5. Know heart structures	**5.1** Create a diagram of the heart structure of different exotic species and identify individual structures

6. Know vessels used for injections and palpation of the pulse	**6.1** Identify the following blood vessel types and their structure • artery • vein • capillary **6.2** Identify common sites of venepuncture **6.3** Describe how the circulation can be affected by different factors
7. Know the anatomy of the urinary tract in birds and reptiles.	**7.1** Compare the urinary anatomy of a range of species **7.2** Explain the production of uric acid in birds and reptiles **7.3** Describe the function of the cloaca and its location in the body **7.4** Identify normal/abnormal urinary excretions
8. Know differences in digestive systems	**8.1** Compare the structure and function of digestive systems (carnivore, herbivore, omnivore) to include • rabbit • tortoise • goldfish • garter snake • hard bills (seed eaters) • budgerigar • finches • parrots • soft bills • mynahs • raptors • kestrels • owls

	8.2 Describe the following nutritional imbalances • vitamin C deficiency in cavies • osteodystrophy in chelonia and small rodents • hypovitaminosis A in reptiles and birds • thiamine deficiency in garter snakes • iodine deficiency in budgerigars **8.3** Recognise and report abnormal droppings **8.4** Explain the role of coprophagia
9. Know respiratory systems	**9.1** Describe the differences in the respiratory systems of the • bird • snake • lagomorph • chelonians **9.2** Identify normal respiratory patterns **9.3** Describe the factors affecting respiratory function, to include the following species • rabbit • budgerigar • reptile • fish **9.4** Describe the signs of respiratory distress **9.5** Explain how environmental and behavioural factors may affect respiration including • temperature • humidity • hibernation • exercise • stress • metabolic rate

10. Know the effect of water quality on the respiratory mechanisms of fish	**10.1** Explain the effect of water quality in aquariums and the effects of ammonia and nitrites
11. Be able to use correct terminology to refer to body structures, functions, directions and positions	**11.1** Describe anatomical directions and veterinary terminology in common use **11.2** Identify the common anatomical directions, to include: • dorsal • ventral • cranial • caudal • proximal • distal • medial • lateral
Mapping to National Occupational Standards No mapping	

Supporting Unit Information

D/502/7628 Exotic animal anatomy and physiology - Level 3

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1 Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2 Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive.

Note 3 The exotic animal species used in this example is the rabbit.

LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10 and LO11 are knowledge outcomes.

Learning Outcome 1. Identify and locate tissues illustrating structure and shape

1.1 State the classification and structure of tissues in the body including cell types and tissue structure

- **epithelial tissue** Single or layered sheets of epithelial cells. Covers inner and outer surfaces of the body. A single layer is referred to as simple and layered is referred to as stratified. Cells are classified by their shape – cuboidal is cube shaped, squamous is flattened, and columnar is tall and column shaped. Simple squamous is a single sheet of flat cells. Found at sites of diffusion such as alveoli and blood vessels. Simple cuboidal lines glands and ducts such as kidney tubules. Simple columnar lines the intestines and allows absorption of nutrients. Ciliated epithelium has hair like projections called cilia on its surface. Lines cavities where things need to be moved such as the respiratory tract. Stratified epithelium is a series of layers which are tough and provide protection at sites of friction. Transitional epithelium found where structures need to stretch such as the

bladder. Glandular epithelium contains secretory cells, which secrete material into spaces or cavities.

- **muscular tissue** is either skeletal, smooth or cardiac. Skeletal is attached to the skeleton and assists with locomotion. It is voluntarily controlled by the brain. Cells are cylindrically shaped and are called muscle fibres. The fibres are arranged in bundles. Smooth muscle is located throughout the body in areas such as the oesophagus and bladder. Spindle shaped cells which are arranged in sheets or bundles. Smooth muscle is under involuntary control.
- **nervous tissue** consists of neurons. Neurons are composed of a cell body and nucleus, dendrites and dendrons and an axon
- **connective tissue** can be loose, dense, cartilage, bone and blood. Loose tissue is located beneath the skin, connecting organs and between spaces. Contains fibroblasts and macrophages, collagen and elastic fibres. Adipose tissue contains many fat cells. Dense is found in tendons and ligaments. Tendons contain collagen fibres and ligaments elastic fibres. Cartilage is a matrix of chondrin, chondrocytes and collagen fibres. No blood supply. There are three types of cartilage Hyaline, Elastic and Fibrocartilage. Blood is found within the circulatory system and contains erythrocytes, leucocytes, platelets and plasma.

1.2 Identify basic types tissue, to include:

- **muscular tissue –** See LO1.1
- **epithelial tissue -** See LO1.1
- **nervous tissue -** See LO1.1
- **connective tissue -** See LO1.1

Learning Outcome 2. Identify and locate the body cavities and state and locate the major organs and structures within these body cavities

2.1 Describe and identify the position of the body cavities

- **thoracic cavity** located cranially. Enclosed by the ribs. Its boundaries are the thoracic inlet, the diaphragm, thoracic vertebrae, sternum, ribs and intercostal muscles. Divided into right and left pleural cavities by the mediastinum. Contains the lungs and the heart.
- **abdominal cavity** located caudally. Its boundaries are the diaphragm, the pelvic inlet, lumbar vertebrae, ventral abdominal muscle and lateral abdominal muscle. Contains the abdominal organs to include liver, spleen, stomach, pancreas, intestines, bladder and reproductive organs and kidneys.

2.2 Define

- **serosa** a thin serous membrane. Lines the cavities of the body and produces a serous fluid. The fluid lubricates surfaces and allows structures to slide against each other.
- **pleura** serous membrane which lines the thoracic cavity. Divides the thoracic cavity into right and left sides.
- **peritoneum** serous membrane lining the abdominal cavity. Separates the organs within the abdominal cavity.
- **pericardium** a double layered membrane which encloses the heart.
- **mesentery** a double fold of peritoneum which supports the stomach and intestines.
- **mediastinum and the organs within these** a double layer of pleura which divides the thoracic cavity into its right and left sides. Organs located within the mediastinum include the heart.

2.3 List the important organs within the thoracic and abdominal cavity organs within the thoracic cavity include the oesophagus, trachea, heart and lungs. Organs within the abdominal cavity include the spleen, liver, pancreas, gall bladder, stomach, intestines, kidneys, bladder and reproductive organs.

Learning Outcome 3. Identify the basic skeletal structure and conformation of exotic species

3.1 Identify the basic skeletal structure of the

- **snake** skull (including jaw and joints), dentition, vertebrae, ribs and vestigial limbs
- **lagomorph** axial and appendicular skeleton, dentition and number of digits
- **chelonian** exo and endoskeleton, dorsal vertebrae, ribs, skull and jaw, carapace, plastron, limbs and digits, tail and lengths
- **bird** keel bone, pelvis, skull, quadrate bone, cranio-facial hinge, wings, beak, legs and feet
- **fish** opercular, dorsal fin, neural spine, vertebrae, hypural, caudal fin ray, anal fin ray, ribs, pelvis fin ray, pectoral fin ray, pelvic girdle, clavicle, lower and upper jaw, orbit and skull

3.2 Compare and contrast the differences between exotic species and the dog and cat thinner and more fragile bones, differences in conformation, differences in number of vertebrae. Otherwise similar to the cat and dog.

3.3 Identify the anatomical differences and locate these on a live animal see LO3.2

3.4 Describe the common skeletal conditions which can affect the

- **snake –** metabolic bone disease, vitamin D deficiency, hypovitaminosis A, thiamine deficiency
- **lagomorphs –** arthritis, osteophytes/bone spurs, genetic splay leg, metabolic bone disease, vitamin D deficiency
- **bird –** metabolic bone disease, vitamin D deficiency, hypovitminosis A, iodine deficiency

Learning Outcome 4. Identify the skeletal muscles

4.1 Identify the common muscles which are used for intramuscular injections quadriceps, dorsal lumbar (epaxial)

Learning Outcome 5. Create a cross section of the heart and identify individual structures

5.1 Create a diagram of the heart structure of different exotic species – include myocardium, left and right atria, left and right ventricles, septum, atrio-ventricular valves, aortic valve, pulmonary valve, aorta, vena cava, pulmonary artery, pulmonary vein

Learning Outcome 6. Identify major vessels and specify superficial vessels used for injections and palpation of the pulse

6.1 Identify blood vessel types and their structure

- **artery** carry blood away from the heart (except the pulmonary artery), carry oxygenated blood, muscular walls.
- **veins** carries blood towards the heart, carry deoxygenated blood (except the pulmonary veins), thinner walled and less muscular than arteries, contain valves to prevent back flow of blood.
- **capillaries** link arteries and veins, narrow and thin walled, single layer of cells.

6.2 Identify common sites of venepuncture jugular, cephalic, saphenous and marginal ear vein

6.3 Describe how the circulation can be affected by factors such as

- **exercise** raised heart rate
- **stress** raised heart rate
- **health and disease** can raise or lower heart rate according to condition. May also cause weakness and abnormal rhythm
- **anaesthesia** lowered heart rate, sinus arrhythmia
- **sedation** lowered heart rate
- **environment** may raise or lower heart rate depending on environmental conditions

Learning Outcome 7. Appreciate the principle differences in the anatomy of the urinary tract in birds and reptiles

7.1 Compare the urinary anatomy of a range of species structure of rabbit kidneys varies with the species of rabbit and their environment. Desert species have large kidneys and alpine species have smaller. Urine produced is thicker and creamier than other species due to excretion of calcium.

7.2 Explain the

- **production of uric acid in birds and reptiles** nitrogenous waste is excreted as uric acid and urates. Waste materials are suspended within the water of the urine rather than dissolving, therefore semi solid urine leaves the kidneys. The ureters take this to the cloaca where it passes by retro peristalsis into the large intestine. Here more water is absorbed.
- **the absence of a bladder in birds** birds urinary system consist of two kidneys, two ureters and the cloaca. No bladder is present
- **range of urinary excretions** see LO7.1 and above (uric acid)

7.3 Describe the function of the cloaca and its location in the body see LO7.2. The cloaca is located caudally of the body and is the external opening shared by the urinary, digestive and reproductive tracts.

7.4 Identify normal/abnormal urinary excretions See LO7.1. Normal rabbit urine is cloudy. Abnormal would be alterations in colour, frequency and volume.

Learning Outcome 8. Identify types of diet and digestive systems of a range of species and explain the variations compared to the dog

8.1 Compare the structure and function of digestive systems (carnivore, herbivore, omnivore) including the

- **rabbit** rabbit is a herbivore. Oral cavity is longer and narrower than a dogs. Dentition are open rooted. Do not possess canine teeth. Digestive system is longer than the canines to allow for the digestion of plant material. Developed cardiac and pyloric sphincters making rabbits unable to vomit. Duodenum, Jejunum and ileum are very long. The ileum ends in the caecum. The caecum is the largest organ in the rabbits abdomen. Rabbits are coprophagic.
- **tortoise** herbivore, have beaks instead of teeth. Large, fleshy tongues. Oesophagus is situated on the left side of the neck. The

oesophagus is short and the stomach simple. Rate of digestion is dependent on temperature.

- **goldfish** stomach is tube like in structure compared to the sac structure of the canine. The intestine is the same diameter throughout, unlike the varying diameters of the canine.
- **garter snake** carnivorous. Possess 6 rows of teeth, fused to the mandible and continuously replaced. Have a forked tongue to allow for taste and is linked with the Jacobsons organ. They have an elongated stomach and short intestines. Possess a cloaca.
- **hard bills (seed eaters) budgerigar, finches, parrots** beak instead of teeth. Small immobile tongues (except parrots who have large fleshy tongues). Have many salivary glands. Oesophagus sits on the right side of the neck and ends into a diverticulum called the crop. Used for food storage. Seed eaters have large crops. Stomach is divided into two sections as opposed to the canine 3. This is the proventriculus and a gizzard. The gizzard grinds up the seeds. Large intestine has two blind ended caeca. Have a cloaca which has three sections. Coprodeum receives faeces, urodeum receives kidney discharge and linked with reproductive tract, proctodeum collects and stores the discharges.
- **soft bills mynahs** digestive system is much shorter
- **raptors kestrels and owls** owls have no crop. Shorter slightly coiled small intestine

8.2 Show an awareness of specific nutritional imbalances such as

- **vitamin C deficiency in cavies** cannot synthesise their own and therefore is an essential nutrient in their diet. Clinical signs can develop rapidly if deficient. Clinical signs include anorexia, depression, poor coat, weight loss, swollen painful joints, lameness, poor bone and teeth development, painful mouths, bleeding gums, and infections
- **osteodystrophy in chelonia and small rodents** occurs when deficient in calcium or vitamin D exposure (no exposure to UV light). Clinical signs or soft, misshapen bones/shells.
- **hypovitaminosis A in reptiles and birds** occurs when diet is lacking fruit and vegetables. Causes poor health and the animal is more susceptible to infections. Can cause swollen eyelids. Can also affect respiratory system, liver and kidneys.
- **thiamine deficiency in garter snakes** can be caused by feeding too much fish. Clinical signs include loss of co-ordination and motor function and convulsions.

- **iodine deficiency in budgerigars** needed to maintain thyroid function and therefore regulating growth, digestion, heart rate, body temperature, nervous system and reproductive system. Clinical signs include enlarged thyroid and difficulty breathing.

8.3 Recognise and report abnormal droppings; explain the role of coprophagia – runny, bloody faeces are abnormal and should be reported both verbally and written/electronically to supervisor. Rabbits normal faeces first leaves the anus as soft, mucous covered pellets (caecotrophs). These are eaten by the rabbit (coprophagia). By passing through the stomach twice nutrients produced by microbial fermentation are then digested.

Learning Outcome 9. Compare respiratory systems, observe and record respiration rates

9.1 Describe the differences in the respiratory systems of the

- **bird** smaller size of the lungs, the air sacs and the unidirectional flow of air allowing more oxygen to be available
- **snake** difference in the structure of the glottis and its capacity to extend outside of the mouth during the consumption of large meals. The vestigial or rudimentary left lung and the absence of a diaphragm.
- **lagomorph** location and function of the nares/nasal cavity. The role of the nasopharynx in respiration, the larynx, the trachea, the bronchi and bronchioles – explain how they enter the lungs and divide down into the respiratory or terminal bronchioles, the alveolar ducts, the alveolar sac and the alveoli, the lungs and the diaphragm including how it plays its part in respiration and what other factors control respiration.
- **chelonians** lack of lung alveoli and a diaphragm. The ribs are fused to the upper shell and the lungs are fixed to the carapace. How respiration is achieved by the extension and retraction of the legs to decrease and increase lung pressure

9.2 Identify normal respiratory patterns normal respiratory pattern of a rabbit is 35-60 breaths per minute. Regular rhythm and depth

9.3 Describe the factors affecting respiratory function; to include the following species

- **rabbit** exercise, stress, fever, and humidity
- **budgerigar** exercise, stress, parasites, iodine deficiency
- **reptile** exercise, stress, humidity, respiratory disease

- **fish** oxygen content of the water, water temperature, increased activity

9.4 Recognise the

- **signs of respiratory distress** increased or decreased rate, abnormal or increased respiratory effort and noises, cyanosis, collapse and recognise how environmental and behavioural factors may affect respiration including
- **temperature** excessive high temperatures can raise the respiratory rate
- **humidity** higher levels of humidity will result in raised respiratory rates
- **hibernation** lowered respiratory rate with intermittent short periods of apnoea
- **exercise** increased levels of exercise raises respiratory rates
- **stress** results in increased respiratory rates
- **metabolic rate** increase in metabolic rate leads to increase in respiration

Learning Outcome 10. Know the effect of water quality on the respiratory mechanisms of fish

10.1 Evaluate the effect of water quality in aquariums and the effects of ammonia and nitrites incorrect water quality can affect the health of fish and cause death. Incorrect pH results in reduced respiration, damage to eyes and gills and possible death. Changes in water temperature can cause stress and weakened immunity. Tap water chemicals can cause burns to fish. Poor water circulation allows build-up of waste products in the water. Ammonia levels are caused by new tank set ups, too many fish, change in water condition or poor filtration. Signs include fish gasping at water surface, purple/red gills, lethargy, anorexia, lying at bottom of tank, and red streaks on fins/body. High levels of ammonia are often followed by high levels of nitrites.

Signs include fish gasping at surface, surrounding water outlets, lethargy, tan/brown gills and rapid gill movements. Both can be avoided by routine water testing.

Learning Outcome 11. Be able to use correct terminology to refer to body structures, functions, directions and positions

11.1 Describe anatomical directions and veterinary terminology in common use

- **dorsal** towards the back surface
- **ventral** towards the under surface
- **cranial** towards the head
- **caudal** towards the tail
- **proximal** towards the centre/body
- **distal** furthest away
- **medial** towards the midline
- **lateral** towards the sides
- **tachypnoea** increased respiration
- **bradypnoea** decreased respiration
- **dyspnoea** difficulty breathing
- **apnoea** cessation of breathing
- **tachycardia** increased heart rate
- **bradycardia** decreased heart rate
- **pyrexia** increased temperature

11.2 Identify the common anatomical directions; to include:

- **dorsal** See LO11.1
- **ventral** See LO11.1
- **cranial** See LO11.1
- **caudal** See LO11.1
- **proximal** See LO11.1
- **distal See** LO11.1
- **medial See** LO11.1
- **lateral See** LO11.1

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place. Teaching and learning strategies may include traditional teaching methods and a range of experiential learning activities e.g. by observation of animal care tasks, witness testimonies, answering oral or written questions, assignments or internet research.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence. The workplace may be of an employed, voluntary or non-employed status, but they must be able to gain real experience of a veterinary care environment.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding

- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Assessors may use any method that is reliable, valid and fit for purpose. Units should only be signed off once all the requirements of the unit are met.

Portfolios do not need to be very large and must contain the learners' own work, not an abundance of tutor handouts

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards web site for further information

Recognition of Prior Learning (RPL), Exemption and Credit Transfer

Skills and Education Group Awards policy enables learners to avoid duplication of learning and assessment in a number of ways:

- Recognition of Prior Learning (RPL) – a method of assessment 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 do not need to develop through a course of learning.
- Exemption - Exemption applies to any certificated achievement which is deemed to be of equivalent value to a unit within Skills and Education Group Awards qualification but which does not necessarily share the exact learning outcomes and assessment criteria. It is the assessor's responsibility, in conjunction with the Internal Moderator, to map this previous achievement against the assessment requirements of the Skills and Education Group Awards qualification to be achieved in order to determine its equivalence.
  Any queries about the relevance of any certificated evidence, should be referred in the first instance to your centre's internal moderator and then to Skills and Education Group Awards.
  It is important to note that there may be restrictions upon a learner's ability to claim exemption or credit transfer which will be dependent upon the currency of the unit/qualification and a learner's existing levels of skill or knowledge.
  Where past certification only provides evidence that could be considered for exemption of part of a unit, learners must be able to offer additional evidence of previous or recent learning to supplement their evidence of achievement.
- Credit Transfer – Skills and Education Group Awards may attach credit to a qualification, a unit or a component. Credit transfer is the process of using certificated credits achieved in one qualification and transferring that achievement as a valid contribution to the award of another qualification.
  Units/Components transferred must share the same learning outcomes and assessment criteria along with the same unit number. Assessors must ensure that they review and verify the evidence through sight of:
    - Original certificates OR

    - Copies of certificates that have been signed and dated by the internal moderator confirming the photocopy is a real copy and make these available for scrutiny by the External Moderator.
- Equivalencies – opportunities to count credits from the unit(s) from other qualifications or from unit(s) submitted by other recognised organisations towards the place of mandatory or optional unit(s) specified in the rule of combination. The unit must have the same credit value or greater than the unit(s) in question and be at the same level or higher.

Skills and Education Group Awards encourages its centres to recognise the previous achievements of learners through Recognition of Prior Learning (RPL), Exemption, Credit Transfer and Equivalencies. Prior achievements may have resulted from past or present employment, previous study or voluntary activities. Centres should provide advice and guidance to the learner on what is appropriate evidence and present that evidence to the external moderator in the usual way.

Further guidance can be found in 'Delivering and Assessing Skills and Education Group Awards Qualifications' which can be downloaded from the qualification page

Certification

Learners will be certificated for all units and qualifications that are achieved and claimed.
Skills and Education Group Awards' policies and procedures are available on the web site.

Exemptions

This qualification contains no exemptions. For further details see Recognition of Prior Learning (RPL), Exemptions, Credit Transfers and Equivalencies.

Glossary of Terms

GL (Guided Learning)

GL is where the learner participates in education or training under the immediate guidance or supervision of a tutor (or other appropriate provider of education or training). It may be helpful to think – 'Would I need to plan for a member of staff to be present to give guidance or supervision?'
GL is calculated at qualification level and not unit/component level.

Examples of Guided Learning include:

- Face-to-face meeting with a tutor
- Telephone conversation with a tutor
- Instant messaging with a tutor
- Taking part in a live webinar
- Classroom-based instruction
- Supervised work
- Taking part in a supervised or invigilated formative assessment
- The learner is being observed as part of a formative assessment.

TQT (Total Qualification Time)

'The number of notional hours which represents an estimate of the total amount of time that could reasonably be expected to be required, in order for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a qualification.' The size of a qualification is determined by the TQT.

TQT is made up of the Guided Learning (GL) plus all other time taken in preparation, study or any other form of participation in education or training but not under the direct supervision of a lecturer, supervisor or tutor.
TQT is calculated at qualification level and not unit/component level.

Examples of unsupervised activities that could contribute to TQT include:

- Researching a topic and writing a report
- Watching an instructional online video at home/e-learning
- Watching a recorded webinar
- Compiling a portfolio in preparation for assessment
- Completing an unsupervised practical activity or work
- Rehearsing a presentation away from the classroom
- Practising skills unsupervised

- Requesting guidance via email – will not guarantee an immediate response.