

Unit 13: Understand and Interpret Animal Behaviour and Communication

Unit code:	D/600/9401
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

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

The aim of this unit is to provide the learner with the knowledge and skills to understand the principles of animal behaviour and communication. The learner will develop skills to interpret animal behaviour and understand the factors which influence such behaviour.

● Unit introduction

Animal behaviour is a popular area of study within the animal care sector. Anyone working with animals needs to know and understand both normal and abnormal behaviour and the triggering factors, in order to care for animals properly and to respond correctly to enquiries from the public. This knowledge and understanding is necessary to enable effective working practices, and also to help ensure the safety and welfare of the animals and those who live or work with them.

Learners will gain knowledge of how abnormal behaviour can occur and how to identify and record many different behaviours.

The unit also focuses on animal communication, both within and between species. Learners can use this unit to explore and observe animals either directly or via media footage, and use internet and library resources to gather knowledge relevant to a variety of species.

Throughout the unit learners will be made aware of health and safety and animal welfare issues and will learn to follow relevant guidelines.

● Learning outcomes

On completion of this unit a learner should:

- 1 Understand behaviour patterns in animals
- 2 Be able to interpret animal behaviour
- 3 Understand the factors influencing behaviour
- 4 Understand animal communication.

Unit content

1 Understand behaviour patterns in animals

Behaviour patterns: normal behaviour (foraging, prey capture, predator avoidance, sleep/wake cycles, grooming/allogrooming, defensive strategies, fight or flight, courtship, displacement behaviours, abnormal behaviour (stereotypic behaviour, hyperactivity, inactivity, learned helplessness); management strategies for abnormal behaviour

Lifestyles: wild, captive and domestic; how behaviours differ between same animals that have different lifestyles; factors affecting lifestyles

2 Be able to interpret animal behaviour

Visual signals: dominance, submission, fear, aggression, stress

Monitoring behaviour: learned, instinctive; different methods of monitoring; reporting problems

Recording behaviour: learned, instinctive, tried and tested methods of recording behaviours and alternatives

Ethograms: construction and interpretation of data

3 Understand the factors influencing behaviour

Development of behaviour: evolutionary development and theories; how species-specific behaviour has evolved over time eg land/sea/flying animals

Factors influencing behaviour: internal (physical, physiological, psychological); external (environment: natural, captive, domestic habitats, conspecifics, migration, predators, humans)

Animal learning: operant and classical conditioning; habituation; insight learning

4 Understand animal communication

Senses used: visual, olfactory, tactile, auditory, gustatory, pheromones

Bonding: filial, sexual; importance; mechanisms; influencing factors; behaviour; interspecific (positive and negative aspects); intraspecific

Imprinting: importance; mechanisms; influencing factors; behaviour

Conflict: signals used to reduce conflict between group and solitary animals; causes of conflict

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 analyse whether an animal is behaving normally or abnormally [IE, SM]	M1 discuss the range of abnormal behaviours which can occur in domestic and captive species	D1 explain in detail valid management strategies for abnormal behaviour
P2 explain the possible causes of abnormal behaviour in animals		
P3 compare the behaviour of a wild animal with its captive or domestic counterpart [CT, RL]		
P4 identify visual signs that an animal species would show for the following behaviours dominance, submission, fear, aggression, stress	M2 construct an ethogram for one species of animal to record and identify its behaviours	
P5 monitor learned and instinctive behaviour in animals		
P6 record learned and instinctive behaviour in animals		
P7 explain the evolutionary development of behaviour		D2 explain in detail how to use valid learning processes and behavioural influences to train captive or domestic animals.
P8 discuss how internal and external factors can influence behaviour [EP]		
P9 discuss how the senses are involved in animal communication [TW]	M3 explain how bonding and imprinting can aid survival in animal species.	
P10 compare bonding and imprinting in animals		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P11 explain how effective communication can reduce conflict between animals.		

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

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

Delivery

Delivery of this unit will involve practical activities, written assessment, visits to suitable collections and will link to work experience placements.

Whichever delivery methods are used, appropriate risk assessments should be carried out before any activities take place. It is essential that tutors stress the importance of animal welfare during any interactions with or observations of animals.

The distinction between domestic and captive animals, as they relate to this unit, is that 'domestic' applies to companion animals such as dogs, cats, small mammals and horses. In addition to the family home situation, the domestic environment can include kennels, catteries, stables and centre animal units. 'Captive' applies to wild species kept in collections such as zoos, aquaria etc.

Learners will benefit from viewing television programmes related to animal behaviour and from visits to animal collections.

Relevant work placements should be monitored to ensure quality of provision. It would be beneficial if learners and supervisors were made aware of the requirements of this unit before any work-related activities take place, so that naturally occurring evidence can be collected at the time. For example, learners may have the opportunity to observe a variety of animal behaviours and they should ask for observation records and/or witness statements to be provided as evidence.

Outline learning plan

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

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

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

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Theory: animal behaviour patterns, lifestyles.
Practical observation sessions: behaviour patterns.
Assignment 1: Animal Behaviour Patterns (P1, P2, P3, M1, D1)
Tutor introduces assignment brief.
Learners complete assignment using tutor guidance and self-directed study.
Theory: interpreting behaviour.
Practical activity: ethograms.
Assignment 2: Interpreting Animal Behaviour (P4, P5, P6, M2)
Tutor introduces assignment brief.
Learners complete assignment using tutor guidance and self-directed study.
Theory: factors influencing behaviour.

Topic and suggested assignments/activities and/assessment

Practical activity: observation of influencing factors on behaviour.

Assignment 3: Factors Influencing Behaviour (P7, P8, D2)

Tutor introduces assignment brief.

Learners complete assignment using tutor guidance and self-directed study.

Theory: animal communication.

Assignment 4: Animal Communication (P9, P10, P11, M3)

Tutor introduces assignment brief.

Learners complete assignment using tutor guidance and self-directed study.

Assessment

For P1 and P2, learners need to observe, analyse and explain the behaviour of a minimum of four different animal species, either directly or via media technology and explain related causes. With tutor guidance, they need to establish whether such behaviours are normal or abnormal for the species. Evidence could be a poster annotated to include photographs/pictures of each behaviour and the category it falls into.

P3 requires learners to compare the behaviour of a wild species and its domestic or captive counterpart. Learners could create an illustrated table to demonstrate the comparisons and include written explanations to accompany each behaviour.

For P4, learners need to identify the visual signs of a range of behaviours. All behaviours listed in the unit content must be covered in learner evidence. At least two different animal species should be referenced. Diagrams, pictures and video/DVD clips could be used in an oral presentation, or learners could produce a poster with pictures and descriptions.

P5 and P6 involve practical tasks to monitor and record animal behaviour in a minimum of three animal species. Learners should observe an agreed animal for a prescribed amount of time and note down its activities. A list and description of behaviours observed and recorded would be suitable evidence. Alternatively, authentic recorded evidence (camcorder/video camera) could be used in an oral presentation which includes descriptors.

For P7, learners must explain how behaviour has evolved in a chosen animal species. A comparison to other flying, land and/or sea animals should be used to illustrate the explanation.

For P8, learners are required to discuss how internal and external factors can influence animal behaviour. This could be assessed by a case study of two animals at the centre, maybe changing the enrichment in their environment to see how they react to it as an external factor, and observing animals in a vets or kennels/cattery/collection when they arrive to see how they react to stressful situations. Animals must not be put in any stressful situations on purpose so that learners can observe them. It should be naturally occurring if animals are observed in these or similar situations.

P9 requires learners to discuss how animal senses are involved in communication. Learners should cover all the senses listed in the unit content and a minimum of two species. Annotated diagrams, illustrated written work or an oral presentation could be used to present the evidence.

For P10, learners need to compare bonding and imprinting in animals. Bonding should concentrate on a mammal species and imprinting on a bird species. Learners must state the importance of such behaviours but also how interspecific bonding can be positive, for example a dog, or detrimental, for example a parrot.

M1 requires learners to discuss abnormal behaviours seen in captive and domestic animals. Learners should cover a minimum of two abnormal behaviours in captive and two in domestic animals, discussing what the behaviours are and the situations in which they occur. A short essay with illustrations or an oral presentation could be used as evidence.

M2 is a practical task where learners must construct an ethogram appropriate to the situation and animal species they are to observe. This links closely to P5 and P6. Learners should state why they have used the particular type of ethogram and why it is applicable.

For M3, learners must research how bonding and imprinting aid species survival. A short essay explaining the benefits of these behaviours for a range of species can provide evidence.

D1 requires learners to explain valid management strategies for abnormal behaviour in one domesticated and one captive animal. Learners must include the type of behaviour exhibited and the common relevant management strategies to resolve this behaviour.

D2 asks learners to explain how they can use animal learning and factors influencing animal behaviour to train animals. Learners can focus on a captive or domesticated animal.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, M1, D1	Animal Behaviour Patterns	You work for an animal training organisation. You need to include evidence from at least three animals for this assignment: one wild; one domestic and one captive. For each animal you will observe it, either directly or via video/DVD footage, and state whether the behaviours you see are normal or abnormal. You also need to explain a minimum of three abnormal behaviours, which can occur in one domesticated and one captive species, and how to manage abnormal behaviours in these species.	Practical observation. Written assessment to include any or all of the following: <ul style="list-style-type: none"> • poster • table • annotated diagram • illustrated essay.
P4, P5, P6, M2	Interpreting Animal Behaviour	You are required to research and describe the visual signals of dominance, submission, fear, aggression and stress in at least two species of animal. You then need to monitor and record the behaviour of one animal using an ethogram that you have designed. Within the ethogram you need to list and describe the behaviours seen, stating whether they are learned or instinctive behaviours.	Practical observation. Written assessment to include any or all of the following <ul style="list-style-type: none"> • poster • table • annotated diagram • illustrated essay • ethogram.

Criteria covered	Assignment title	Scenario	Assessment method
P7, P8, D2	Factors Influencing Behaviour	For this written assignment you need to discuss how the behaviour of flying, land and sea animals has evolved, using one animal from each category. You also need to list and discuss any internal and external factors which influence animal behaviour. From the knowledge you have gained so far, explain how animal learning processes and behavioural influences can be used to train captive or domestic animals.	Written assessment to include any or all of the following <ul style="list-style-type: none"> • poster • table • annotated diagram • illustrated essay.
P9, P10, P11, M3	Animal Communication	This is a written assignment where you need to discuss how two species of animals use their senses to communicate. Senses are used in bonding and imprinting and you need to compare these two behaviours, state how they occur in one mammal (bonding) and one bird (imprinting) species and how they help survival. Effective communication can reduce conflict between animals and you need to explain how this happens.	Written assessment to include any or all of the following: <ul style="list-style-type: none"> • poster • table • annotated diagram • illustrated essay.

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

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

Level 2	Level 3
Introduction to Animal and Plant Husbandry	Understand Animal Welfare and Breed Development
	Undertake Kennel and Cattery Management

Essential resources

Learners should have access to appropriate wildlife videos/DVDs, a form of video camera for recording animal behaviours and a stopwatch or similar for any timed behaviours.

Resources for this unit could include in-house animals, the learner's pets and site visits to animal collections or facilities such as zoos, kennels, catteries, stables, and rescue centres. Speakers from local animal training clubs could provide information relevant to learning outcomes 2 and 3.

Employer engagement and vocational contexts

Any work placements in the animal care sector will enhance the learning experience. Centres are encouraged to develop links with a variety of local animal establishments to facilitate placements. Work placements in kennels, catteries, zoos or pet shops can enhance learners' experience for this unit.

Indicative reading for learners

Textbooks

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

Domjan M.- *The Principles of Learning and Behavior, Fifth Edition* (Wadsworth Publishing, 2005)
ISBN 9780534605902

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

Martin P and Bateson P – *Measuring Behaviour: An Introductory Guide, Second Edition* (Cambridge University Press, 2001) ISBN 9780521446143

Pryor K – *Don't Shoot the Dog!: The New Art of Teaching and Training* (Ringpress Books, 2002)
ISBN 9781860542381

Journals and magazines

Animal Behaviour

Applied Animal Behavioural Science

Your Cat Magazine

Your Dog Magazine

Websites

Association of Pet Behaviour Counsellors	www.apbc.org.uk
Association of Pet Dog Trainers	www.apdt.co.uk
Cats Protection	www.catsprotection.org.uk
Department for Environment, Food and Rural Affairs	www.defra.gov.uk
The Kennel Club	www.thekennelclub.org.uk

Delivery of personal, learning and thinking skills (PLTS)

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

Skill	When learners are ...
Independent enquirers	researching normal and abnormal animal behaviour
Creative thinkers	comparing animal behaviour
Reflective learners	comparing the behaviour of a wild animal with its captive or domestic counterpart
Team workers	researching with others how the senses are involved in animal communication
Self-managers	managing own time in the investigation of animal behaviour
Effective participators	discussing with others how internal and external factors can influence animal behaviour.