

Unit 14: Undertaking Environmental Interpretation in Land-based

Unit Code	Y/600/9607
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

This unit aims to introduce learners to environmental interpretation skills and understanding and how this can be applied in practice. It is designed for learners in centre-based settings looking to progress into the sector or onto further/higher education.

● Unit introduction

Environmental interpretation can be a very effective means of informing the general public about the world around them. It allows people to understand and relate to subjects that may have previously been unfamiliar to them. Those employed in the land-based industries, and particularly those working in the field of conservation or in visitor attractions, must have the knowledge and skills to communicate their message effectively to visitors. This unit develops these skills so that visitors may appreciate the significance of a site, develop a positive attitude towards a topic and understand technical concepts.

Learners will cover the role of environmental interpretation in the land-based industries, looking at its aims, principles and benefits. The different types of interpretive media that can be used will also be considered. They will look at the importance of interpretive planning and the use of themes.

Learners will gain an understanding of how to produce effective, themed interpretation and the various factors that must be considered when planning and designing interpretation. They will have the opportunity to put these skills into practice when designing a themed environmental interpretation themselves. Learners will also discover how to evaluate the effectiveness of environmental interpretation.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know the role of environmental interpretation and media
- 2 Be able to produce an interpretive plan for a site
- 3 Be able to design a relevant piece of themed environmental interpretation
- 4 Understand how to evaluate the effectiveness of environmental interpretation.

Unit content

1 Know the role of environmental interpretation and media

Principles of environmental interpretation: aims; purpose; benefits; differences between interpretation information and instruction; reasons for interpretation; benefits of interpretation; principles of interpretation (Tilden's six principles, Beck and Cables principles); types of audience; setting (eg nature reserve, zoo, country park, forest, nature walk)

Interpretive media: interpretive panels; self-guided trails; guided trails; signage; guide books/leaflets/maps; reconstructions; displays; role play; puppets; audio handsets; touch tables; presentations; multi-media; events; visitor centres; immersion exhibits; advantages, disadvantages; health and safety; risk assessment; creation/construction methods; maintenance requirement; relative cost; suitability for visitor types, group size and setting; level of skill required

2 Be able to produce an interpretive plan for a site

Interpretive planning: planning interpretive objectives; typical visitor numbers and profile (age, interest, prior knowledge, language, educational level, reason for visiting), group sizes and dynamics; planning interpretation to meet the needs of different visitor types; consideration of relevance to setting; selection of appropriate media; consideration of accessibility; planning guided and self-guided interpretive activities; script/talk/story board planning; planning walks/trails, planning interpretive media (content, location and layout); planning themes and making interpretation interesting, relevant, enjoyable and organised; management requirements (eg upkeep and maintenance, staffing, finance, health and safety)

3 Be able to design a relevant piece of themed environmental interpretation

Processes: planning; use of themed interpretation; building interpretive media around a theme; consideration of site layout and accessibility; consideration of visitor types and numbers, group sizes and dynamics; construction of signage, displays and exhibits; use of design principles; use of pictures and photographs; use of methods to protect media

Preparing interpretation: eg panel, leaflet, self-guided trail; sources of information; accuracy and validity; themes and topics (differences); making interpretation interesting and relevant; attracting visitors' attention; ease of use; setting, siting and ambience

Design considerations for printed interpretation: organisation and layout; presentation; style of typeface; size of typeface; text hierarchy; illustrations; line drawings; photographs; use of colour; balance; interactive features; advantages and disadvantages of different construction materials eg wood, metal, acrylics, GRP, foamex, laminates; framing; mounting; structures

Planning talks and tours: organisation of content; presentation skills; presentation styles; using props, eg overhead projector, video, data projector; health and safety; risk assessment

4 Understand how to evaluate the effectiveness of environmental interpretation

Evaluation techniques: reasons for evaluation; evaluation techniques (self-evaluation, evaluation by others: questionnaire, interview, observation, mapping); direct and indirect questioning; open and closed questions; scoring and grading; when to evaluate eg front end, formative, summative; how to use evaluation to suggest recommendations and improvements

Evaluate an interpretation: for meeting objectives; for conveying environmental information in line with interpretive principles (eg interesting, relevant, enjoyable, organised); accessibility for all visitors (physically and conceptually); meeting safety requirements; cost effectiveness; management implications; sustainability

Assessment and grading criteria

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

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the aims, purpose and benefits of environmental interpretation [IE, CT, SM]	M1 compare media that can be used to interpret selected sites	D1 recommend and justify interpretive media for a selected site
P2 outline media that can be used to interpret selected sites [IE, CT, SM]		
P3 carry out interpretive planning [IE, CT, SM]		
P4 explain features of effective environmental interpretation planning [IE, CT, SM]		
P5 describe processes that make an effective piece of themed environmental interpretation [IE, CT, SM]	M3 explain the processes that make an effective piece of themed environmental interpretation	D2 evaluate selected pieces of themed environmental interpretation and suggest recommendations for improvement
P6 carry out themed environmental interpretation for a given site		
P7 explain techniques used to evaluate selected environmental interpretation [IE, CT, SM]	M4 compare the effectiveness of selected environmental interpretations	
P8 evaluate environmental interpretation [IE, CT, SM]		

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

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

Essential guidance for tutors

Delivery

Delivery of this unit is likely to involve a range of techniques. Lectures, discussions, seminar presentations, site visits, supervised practicals, internet and/or library-based research and the use of personal and/or industrial experience would all be suitable. It will be particularly useful for learners to view and experience a range of environmental interpretations in a variety of settings prior to designing their own environmental interpretation.

This unit may be linked to an appropriate work placement. Work placements should be monitored regularly in order to ensure the quality of the learning experience. It would be beneficial if learners and supervisors were made aware of the requirements of this unit prior to any work-related activities so that naturally occurring evidence can be collected at the time. For example, learners may have the opportunity to observe or design forms of environmental interpretation and they should be encouraged to ask for observation records and/or witness statements to be provided as evidence of this. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Whichever delivery methods are used, health and safety issues must be stressed and regularly reinforced, and risk assessments must be undertaken prior to any practical activity.

Learning outcome 1 looks at the principles of environmental interpretation and the different types of interpretive media that can be employed. It is likely that delivery will include a range of site visits supplemented by classroom-based sessions, discussions, and independent learner research.

Learning outcome 2 covers the importance of interpretive planning. As with learning outcome 1, delivery techniques should be varied and can be linked to the delivery of learning outcomes 1 and 3. It is likely that classroom-based activities, discussions and site visits will form part of the delivery of this learning outcome. Visiting expert speakers could add to the relevance of the subject. For example, an education/interpretation officer from a zoo or country park could talk about their work and the methods they use.

Learning outcome 3 investigates the skills required to design an effective piece of themed environmental interpretation. Learners will need the opportunity to practise the design of themed environmental interpretation, which should include both visual and verbal interpretations. Visiting expert speakers could add to the relevance of the subject. For example, a graphic designer or public speaker could talk about their work and the methods they use.

Learning outcome 4 looks at the importance of evaluating interpretation and the methods by which this can be done. Learners will need sufficient opportunity to develop their evaluation skills through evaluating their own and others' work.

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.

Topic and suggested assignments/activities and/assessment

Assignment 1: The Role of Interpretation and Media (P1, P2, M1)

Tutor to introduce assignment to the learners.

Theory lesson – introduce learners to the principles of environmental interpretation and types of media.

Visits to a range of sites to see different types of media and a variety of environmental interpretations.

Classroom discussion – features of effective evaluations, review of evaluations seen.

Learner research and assignment completion.

Assignment 2: Interpretive Planning (P3, P4, M2, D1)

Tutor to introduce assignment to learners.

Classroom activity – key features of effective planning, importance of planning, using objectives.

Theory session – visitor profiles and their use, case study of visitor profiles for a selected site.

Visit to assess a site and its visitor profile.

Class discussion – site factors to consider when planning, accessibility issues.

Theory session – outline and discuss the management requirements of interpretive environment.

Learner research and assessment completion

Assignment 3: Themed Environmental Interpretation (P5, P6, M3)

Tutor to introduce assignment to learners.

Classroom session – Introduce learners to the topic of preparing for interpretation.

Theory session with guest speaker input – outline and discuss the design considerations for printed interpretation.

Classroom session – discuss the importance of planning talks and tours, features of effective talks and tours.

Visit to review construction materials and use of visual materials.

Practical activity designing and producing environmental interpretations.

Assignment 4: Evaluating Effectiveness (P7, P8, M4, D2)

Tutor to introduce assignment to the learners.

Theory session – discuss the importance of evaluating a service.

Classroom activity – selecting criteria for evaluation, using evaluative techniques, self-evaluation, evaluation of others' work.

Practical – Carry out evaluations on own and each other's work.

Discussion – what makes an evaluation useful? How to suggest recommendations.

Learner study time and assessment completion.

Unit review.

Assessment

For P1, learners need to describe the aims, purpose and benefits of environmental interpretation. This should include a description of the principles and origins of environmental interpretation, including Tilden's principles. Evidence for this could take the form of a pictorial presentation with notes, an annotated poster or a written report.

For P2, learners are required to outline media that can be used to interpret selected sites. A minimum of two sites should be selected, either by the tutor or through discussion with learners, and the range of media shown in the unit content should be covered. To meet this criterion the learners are not required to recommend which media to use but to give a brief description of the choices of media available for each site. Evidence may be an annotated site map, poster, leaflet, written or verbal report.

For P3, learners are required to carry out interpretive planning at a selected site. The site may be chosen by the tutor or agreed through discussion with learners. Learners need to produce a plan which indicates the type and location of environmental interpretation. This may be, for example, a series of exhibits, signs or notices along a route, or alternatively may be the plan for a guided tour showing stops and information points.

For P4, learners need to explain the features of effective environmental planning and should cover those shown in the unit content. Evidence may be a verbal or written report, leaflet or poster.

For P5, learners are required to describe the processes needed to produce an effective piece of themed interpretation. This should include those required for a guided interpretation, for example a tour or presentation, and for a self-guided one, for example signs, notices and exhibits. Evidence may be in the same format as P4.

For P6, learners are required to carry out themed environmental interpretation for a given site. The site may be selected by the tutor or agreed through discussion with learners. The interpretation may be a guided one, for example the learner carrying out a tour, or a self-guided one, for example the learner designing and creating a simple exhibit. Evidence may take the form of an observation checklist and photographic records.

For P7, learners need to explain the techniques which are used to evaluate a given environmental interpretation. Evidence may take the form of a verbal or written report or presentation.

For P8, learners are required to carry out an evaluation of a selected environmental interpretation. This may be a piece of the learner's own work, work of others from the class, or an interpretation seen or experienced through a visit or work placement. The evaluation should identify areas of good practice and areas for improvement, and may be written or verbal.

For M1, learners are required to compare the different types of media which can be utilised to interpret selected sites. A minimum of four types of media should be included. This comparison should include aspects such as cost, method of creation, maintenance required, skill levels needed, and suitability for different locations, visitor types and group size. Evidence may be an extension of work completed for P2 and may take the same form, or a comparison table.

For M2, learners are required to review the effectiveness of interpretive planning. This may be the learner's own planning or that of someone else, for example seen at a site visit or explained by a guest speaker. Evidence may link to and be in the same format as for P4.

For M3, learners need to explain the processes which make a themed environmental interpretation successful. This is likely to be an extension of work completed for P5 and may be presented in the same format.

For M4, learners need to compare the effectiveness of selected environmental interpretations. A minimum of two should be compared, using evaluation criteria shown in the unit content. Evidence may be an extension of work completed for P8 and take the same form.

For D1, learners need to recommend and justify interpretive media for a selected site. This is likely to be an extension of work completed for M1 and take the same format. Learners should recommend media for at least three locations within the site selected.

For D2, learners are required to evaluate a minimum of two selected pieces of themed environmental interpretation, suggesting recommendations for improvements which should be justified and supported with interpretive principles. Evidence is likely to be an extension of M3 and M4 and to take the same format.

Programme of suggested assignments

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

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, M1	The role of Interpretation and Media	In your role as an environmental consultant you have been asked to assist an organisation which is looking to improve the visitor experience by developing its environmental interpretation. After your visit to their site, prepare a report which explains the principles of interpretation and outlines the types of media which could be used at two of their locations.	Presentation or written report.
P3, P4, M2, D1	Interpretive Planning	You have been asked to produce an interpretive plan for a forest park. Include an explanation of the features of effective planning and review the effectiveness of your plan. Recommend the media which should be used at three different locations on your plan.	Annotated plan.
P5, P6, M3	Themed Environmental Interpretation	You have been asked to carry out a themed environmental interpretation for a local countryside attraction. Create an informative leaflet for student visitors which explains the processes that you used to ensure your interpretation is effective.	Observation records and leaflet.
P7, P8, M4, D2	Evaluating Effectiveness	You have been asked to help a countryside centre to improve its interpretation. Produce a presentation for the centre manager which explains the techniques you have used, evaluates two of the pieces of environmental interpretation and compares their effectiveness. Recommend improvements based on your evaluation and interpretive principles.	Written report.

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

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

Level 2	Level 3
Conservation and Improvement of British Habitats	Element EC25.1 Research information for interpretations Element EC25.2 Plan interpretations
	Undertake an Investigative Project in the Land-based Sector

Essential resources

Learners should have access to a range of information sources and art materials when designing printed interpretation. Access to audio-visual equipment and routine access to IT equipment is strongly recommended. Where possible, learners should have the opportunity to visit sites with both effective and ineffective interpretation. Case studies covering a range of sites should also be made available for learners to assess and evaluate, particularly if site visits are not feasible.

Tutors delivering this unit should have appropriate industrial experience in the field of environmental interpretation and be able to show evidence of regular contact with the industry and/or technical updating.

Employer engagement and vocational contexts

For this unit centres are encouraged to establish links with local organisations which demonstrate the principles of environmental interpretation. These may include countryside centres, parks, formal gardens, zoos, nature reserves and forests. Some parts of the unit could be delivered within a vocational setting by using the learner's work placement.

Indicative reading for learners

Textbooks

Beck L and Cable T – *Interpretation for the 21st Century: Fifteen Guiding Principles for Interpreting Nature and Culture* (Sports Publishing, 2002) ISBN 9781571675224

Carter J – *A Sense of Place: An Interpretive Planning Handbook* (Tourism and Environment Initiative, 1997)

Ham S – *Environmental Interpretation: A Practical Guide for People with Big Ideas and Small Budgets* (Fulcrum Publishing, 1993) ISBN 9781555919023

Hooper–Greenhill E – *Museums and Their Visitors* (Routledge, 1994) ISBN 9780415068574

Pierssene A – *Explaining our World: Guide to Environmental Interpretation* (Taylor and Francis, 1998) ISBN 9780419219408

Strauss S – *The Passionate Fact: Storytelling in Natural History and Cultural Interpretation* (Fulcrum Publishing, 1996) ISBN 9781555919252

Tilden F – *Interpreting our Heritage* (University of South Carolina Press, 1970) ISBN 9780807840160

Veverka J – *Interpretive Master Planning* (Verulam Publishing, 1994) ISBN 9781560442745

Journal

Journal of Interpretive Research

Websites

www.heritageinterpretation.org.uk

Association for Heritage Interpretation

www.interpnet.com

National Association for Interpretation

www.scotinterpnet.org.uk

Scottish Interpreters Network

www.zoolex.org

Zoolex

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	Preparing the plan for the eco village
Creative thinkers	producing, with tutor support reports and presentations
Reflective learners	evaluating the effectiveness of their chosen plan
Self-managers	producing, with tutor support reports and presentations
Effective participators	participating in planning for a new eco development.

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

Skill	When learners are ...
Team workers	collaborating with others when planning for a new eco development.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	researching the internet for information
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	using the internet, textbooks and class notes to complete the unit assignments
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing a report which is generated on the computer
Bring together information to suit content and purpose	producing a report producing a presentation
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	

Skill	When learners are ...
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	ensuring that the plans are measured correctly and to the correct scale
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	participating in presentations and class discussions.
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	