
Environmental and Land-based Studies

Level 3 Unit 8: Global impacts and the Environmental and Land-based sector

Sample scheme of work

This is an example of a scheme of work. You can adjust it or extract content to create a scheme of work to suit your delivery needs. It can also be adjusted by adding theory workshops to support learners who have/need additional learning time.

This unit is assessed through a centre set and marked assignment.

Total GLH	60
Delivery model	Based on teaching three-hour sessions.
Aim	To develop an understanding of how environmental changes will affect the ELB industry. Learners will investigate how enterprises will need to adapt to stay competitive yet at the same time reduce their environmental impact, and the times scale over which this will happen.
Notes	<p>Useful websites:</p> <p>www.netregs.gov.uk</p> <p>www.defra.gov.uk</p> <p>www.fera.defra.gov.uk</p> <p>www.carbontrust.co.uk</p> <p>www.carbonneutral.com</p> <p>The three functional skills units for ICT (use ICT appropriately, find and select information, and develop, present and communicate information) are abbreviated as follows: Use ICT, F&S ICT and DPC ICT.</p>

Topic	Activities, assignments, assessments	LO and AC	PLTS	FS	GLH	Resources and other comments
1 Introduction to unit	<p>Invite a guest speaker from a national company based locally to discuss:</p> <ul style="list-style-type: none"> • How does the company contribute to global warming? • What steps have they taken to reduce the enterprise's contribution to global warming? • What impact would climate change have on the enterprise? • What step has/will the company put in place to respond to climate change and ensure their survival? • What is the timeline in which they plan to complete this? <p>Learners should participate in a question and answer session.</p> <p>Follow with a group discussion to look at other methods of reducing the company's impact on the environment such as reducing the number of cars that members of staff drive to work, canteen food packaging, etc.</p>	AC1a	CT2	SL W	3	

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<p>2 What is climate change and how do we know it is happening?</p>	<p>Define the terms ‘climate change’, ‘global warming’ and ‘carbon footprint’.</p> <p>The tutor should lead a discussion on the scientific evidence available to support the proposition that climate change is happening. What are the significant inputs causing this?</p> <p>Learners must research the scientific data that is available to support evidence that climate change is happening. Learners must consider the other theories available.</p>	AC1a, b	CT2, 3	SL R APM IPM	3	
<p>3 What is climate change and how do we know it is happening? (continued)</p>	<p>Learners must produce a report that draws upon the available scientific evidence. They should quote and correctly cite from these sources and use the data available to extrapolate the possible different scenarios this research could point to. Learners must state any assumptions that are made and provide sound evidence to support these assumptions.</p>	AC1a, b	CT4 SM2	R APM IPM	3	
<p>4 Friends of the Earth</p>	<p>Give a presentation on how the ELB sector is contributing to climate change.</p> <p>Conduct a group discussion on how climate change is affecting UK habitats, both nationally and regionally, and how these areas may change and the predicted time scale. Learners should also discuss the implication should enterprises not be managed in an environmentally sound way.</p> <p>Follow with an open question and answer session.</p>	AC1b	CT2	SL	3	

Topic	Activities, assignments, assessments	LO and AC	PLTS	FS	GLH	Resources and other comments
5 What is the contribution to global warming? Part 1	<p>In groups of three, learners must be given the name of three ELB enterprises. These should be businesses of different scale and across all groups to represent as many sectors of the industry as possible.</p> <p>For each enterprise learners must identify its contribution to global warming. What impact might global warming have on the business? Using business strategies, learners are to suggest a plan that could be implemented to reduce the effects upon the climate by the business and a reasonable timeline for these changes to be put in place.</p>	AC1b	TW1, 2 EP2, 3	SL DPC ICT	3	<p>Climate prediction for the short term is available from DEFRA.</p> <p>The tutor should have an example of a case study that can be completed as a group each week as guidance for the tasks.</p>
6 What is the contribution to global warming? Part 2	Learners should present their ideas to the class in a <i>Dragons' Den</i> style. Comments must be made on the efficiency of this plan by the other learners.	AC1b	TW6	SL DPC ICT	3	
7 Environmental legislation and policies	<p>Learners should research into the legislation that is in place to reduce the environmental impact made by enterprises. (Note this will be sections of existing legislation rather than new acts, eg noise, waste water legislation, etc.)</p> <p>The tutor should lead a discussion on the impact of environmental legislation and government driven policies to ELB enterprises.</p> <p>In groups, learners must review the suggested plans for the three given enterprises and identify whether their suggestions meet current government driven policies. The plans should be rewritten to ensure they comply.</p>	AC2a	SM2 CT1	Use ICT F&S ICT SL	3	<p>Links to Unit 7.</p> <p>Useful website: www.netregs.gov.uk</p> <p>The tutor should have an example of a case study that can be completed as a group each week as guidance for the tasks.</p>

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<p>8 Analyse and evaluate the changes in a business's strategic plans and how these are of mutual benefit to the business and the environment's sustainability</p>	<p>Learners must write a report to analyse and evaluate how the plan will be of mutual benefit to business and climate.</p> <p>Discuss how the business will be meeting the requirements of an environmentally literate society.</p>	AC2a, b	SM2 CT1	DPC ICT	3	<p>The tutor should have an example of a case study that can be completed as a group each week as guidance for the tasks.</p>
<p>9 Does reducing cost save the environment?</p>	<p>Learners should produce a thought shower on the reasons why a florist is often seen receiving deliveries of fresh produce from European countries.</p> <p>Follow with a group discussion to expand on the thought showers that have been created.</p> <p>Learners must produce a report on the effects of importing foreign resources on UK enterprise.</p> <p>Have a group discussion/tour on the innovative use of technology to reduce the usage of resources.</p> <p>Learners should visit a greenhouse that has monitoring equipment in place to measure soil moisture and water plants when it is indicated and temperature and humidity indicators that will activate the appropriate response from other equipment.</p> <p>Learners must outline the advantages and disadvantages of using new technologies.</p>	AC2b	CT2	SL W	3	

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<p>10 Resources management – how can it be improved to benefit the environment?</p>	<p>Learners should produce a thought shower for each of the three enterprise resources used.</p> <p>For each enterprise learners are to suggest how these resources could be managed to ensure the company is run in as environmentally friendly a manner as possible.</p> <p>Learners must consider the impact this would have on the business's viability and where necessary make alternative suggestions that show some environmental consideration but still maintain the success of the business.</p> <p>The report must clearly show that the learners have evaluated the benefits and costs of these changes. Where cost may outweigh the short-term benefit to the company, a prediction of how the changes will ensure the company's survival long term must be included.</p>	AC3b	IE3 SM2	DPC ICT SL W	3	The tutor should have an example of a case study that can be completed as a group each week as guidance for the tasks.
<p>11 Calculating carbon output</p>	<p>Via a group discussion define 'carbon foot print', 'technology fix', 'polluter pays', 'carbon exchange' and 'carbon offset'.</p> <p>Learners must analyse their ELB enterprises to produce a report detailing the carbon output.</p> <p>The tutor will need to provide conversion spreadsheets for the common processes and procedures within businesses.</p>	AC3a	IE4	APM IPM	3	

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12 Carbon management and audit	<p>Invite a guest speaker from either Carbon Trust or Carbon Neutral to present the case for carbon management and companies becoming carbon neutral. What is the cost of managing carbon on environmental, social and economic values?</p> <p>The guest speaker should provide case studies of how companies have become carbon neutral and remained viable.</p> <p>Learners must produce a report on what techniques could be transferable to the ELB enterprise that they have worked on throughout this unit.</p>	AC3a–d AC5a, d	CT2 SM2	SL W	3	
13 Global sources of carbon	Learners should research the major sources of carbon emission around the world. They must produce a report indicating the top 20 carbon-emitting countries, detailing the reasons for carbon emission and the steps that could be taken to reduce it. Particular emphasis should be given to those carbon-reduction projects that would be technology led. They should consider the domino effect this would have and how small steps by many can have a large impact.	AC3c AC5d	CT4 , 6 SM2	Use ICT F&S ICT DPC ICT	3	
14 Threats to the environment from food, waste, power and water	<p>Conduct a group discussion highlighting the threats to the environment from the production of food, the generation of power, the disposal of waste and the supply of water.</p> <p>Learners should consider the impact upon the environment of the production of fruit and vegetables consumed by an average family.</p>	AC4b	IE3, 4	SL	3	The tutor must provide the list of fruit and vegetables and their country of origin. This should cover South America, South Africa, Australasia, Europe and the UK.

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15 Energy production: traditional	<p>The tutor should lead a discussion on traditional energy sources and the efficiencies of the production of energy from these sources.</p> <p>Learners must research the global density of the use of traditional energy sources and the reasons why these energy sources are preferred and their life expectancy.</p> <p>The information gathered during the learners' research will need to be used in a report comparing traditional and renewable energy sources the following week.</p>	AC4a AC5b	CT1 IE3	Use ICT F&S ICT W SL	3	Traditional energy sources: coal, oil, gas, nuclear, hydro.
16 Energy production: renewable	<p>The tutor should lead a discussion on renewable energy sources and the efficiencies of the production of energy from these sources.</p> <p>Learners must research the global density of the use of renewable energy sources and the reasons why these energy sources are preferred and their life expectancy.</p> <p>Learners should produce a report highlighting the global use of energy and making recommendations as to how more environmentally friendly production could reduce the environmental impact of energy usage.</p>	AC4a, b AC5b,c	EP2–4	DPC ICT APM IPM	3	Renewable energy sources: wind, wave, solar, bio fuel and geothermal.

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17 Pollution management	<p>Define 'pollution'. This will need to be supported by a group discussion to ensure coverage of all aspects.</p> <p>The tutor should lead a discussion on the process/methods of quantifying the amount of pollution that is generated.</p> <p>For the three enterprises learners have considered during this unit, they are to state and quantify the pollutants that are a result of the functioning of the enterprise. They should consider the by-products from interlinked business due to the processes used by these enterprises.</p> <p>Learners should research and record the national accepted limits of pollution before it is considered hazardous.</p>	AC4b	SM2	APM IPM F&S ICT	3	Pollution from waste, heat, energy, water as well as the more commonly considered pollutants.
18 Waste management	<p>Define 'waste management'. This will need to be supported by a group discussion to ensure coverage of all aspects. Differentiate between waste and pollution.</p> <p>The tutor should lead a discussion on the process/methods of quantifying the amount of waste that is generated.</p> <p>For the three enterprises learners have considered during this unit, they are to state and quantify the waste that is a result of the functioning of the enterprise. They should consider the by-products from interlinked business due to the processes used by these enterprises.</p>	AC4b	CT2 SM2	APM IPM F&S ICT	3	
19 Assessment					3	
20 Assessment					3	