

ENVIRONMENTAL AND LAND-BASED STUDIES

Unit 6: The importance of a sustainable environment to society



Environmental and Land-based Studies

Level 2 Unit 6: The importance of a sustainable environment to society

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 two-hour written external examination set and marked by AQA-City & Guilds. A specimen paper and mark scheme is available at www.diplomainfo.org.uk

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| Total GLH | 60 |
| Delivery model | Based on teaching three-hour sessions. |
| Aim | Learners will gain an understanding of how the human race has affected the environment and methods that have been adapted to minimise the damage caused. Learners will gain an understanding of the concept of sustainability and its impact on society. |
| Notes | All guest speakers will need detailed guidance on the material you wish them to cover to ensure that the requirements of the course are met. |

| Topic | Activities, assignments, assessments | LO and AC | PLTS | FS | GLH | Resources and other comments |
|---|--|-----------|---------------------|-----------------|-----|---|
| <p>1 Investigation into our lives and the resources we use</p> | <p>As a class, define renewable and non-renewable energy sources.</p> <p>In groups of three, ask learners to identify renewable and non-renewable energy sources that are used in our daily lives.</p> <p>Ask learners to compare their daily energy use to a teenager in a central African country. Then ask learners to identify the average water use per person within the UK, and compare this to one European, one American and one third-world country.</p> <p>Discuss water recycling, eg if you drink a pint of water how many other people have drunk that water before you? These figures should be compared regionally across the UK.</p> <p>Learners should create a list of all the materials used to construct and furnish their home. For each material, they must have a reason for its use and identify its original source.</p> | AC1a | CT1–3 IE1 TW1 | M2 SL1 W1 | 3 | Resources required: SMART Board, data on the energy consumption of a teenager in a central African country. Samples of material used within the construction of homes. |

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| 2 Sustainability | <p>This session should consider if our daily energy is sustainable. Using the list of daily energy from last week, ask learners to identify energy sources that are sustainable and those that are not – justifications must be included.</p> <p>As a class, define the meaning of the terms ‘environmental sustainability’, ‘economic sustainability’ and ‘economic stability’.</p> <p>Learners should then compare the energy used and cost of apples in a supermarket. Learners should look at apples from three different countries (one should be the UK).</p> <p>As a class, consider the usage of water from oceans, rivers, lakes and ponds. Ask learners to list the uses of these and discuss the impact of their uses on their sustainability.</p> | AC1a | CT1–3 IE1 TW1 | M2 SL1 W1 | 3 | Resources required: SMART Board, apples, Map |
| 3 Food production at a local farm | <p>Ask learners to investigate food production at a local farm. Their investigation must consider the sustainability (environmental and economic) of using the following: energy, water, soil, minerals and building materials.</p> <p>Learners must complete their survey of usage from stock purchase and land preparation to the product being sold to a shop. For the whole of the process they must identify ways to reduce consumption and encourage recycling of materials.</p> | AC1b | IE1 TW1 | Use ICT 1.1, 2.3 | 3 | Resources required: access to the farm or a virtual farm and its production records. Links to Unit 5: Plants and animals: their role in society. |

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| 4 GM crops | <p>Arrange for a guest speaker to talk about GM crops.</p> <p>Discuss if GM crops improve sustainability and lessen its impact on the environment.</p> <p>Divide the class into small groups. From the information given by the guest speaker, ask learners to identify whether GM crops could improve sustainability. They must consider the positive and negatives of GM farming. They should also think about food safety legislation that directly affects GM farming.</p> | AC1b AC2a | CT1–3 IE1 TW1, 2 | SL1–3 R1 W1, 2 Use ICT 1.1, 2.3 DPC ICT 1.1, 1.3, 1.5, 3.2 | 3 | <p>Resources required: dependent on guest speaker; examples of genetically modified crops and non-GM modified crops.</p> <p>Links to Unit 5, AC2b: explain the business, cultural and ethical responsibilities of environmental and land-based organisations in respect of plants and animals.</p> |
| 5 Legislation | <p>Introduce legislation, its purpose and relevant Acts, eg the Wildlife and Countryside Act 1981.</p> <p>Arrange for a guest speaker, such as the police wildlife officer for an area, to talk about wildlife crime and the legislation under which people are prosecuted. Learners need to be prepared to ask questions.</p> <p>Using scenarios and the Wildlife and Countryside Act 1981, ask learners to produce reasoned decisions as to whether the Act has been infringed. They must clearly state which section of the Act they think is being breached.</p> | AC2a AC5c | CT1–3 IE1 | SL1–3 W1, 2 R1, 2 | 3 | <p>Resources required: dependent on guest speaker; legislation, scenario cards/photo cards.</p> |

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| 6 Legislation (continued) | <p>Discuss the implications of the Town and Country Planning Act 1990.</p> <p>Arrange a visit to a local rural community and ask learners to photograph any buildings that are in breach, such as buildings that appear out of place with the surrounding environment. Learners need to be prepared to ask questions.</p> <p>Using a pre-prepared slide show, ask learners to identify which section of the Act is being breached and why.</p> | AC2a AC5c | CT1–3 IE1 | R1, 2 SL1 W1, 2 | 3 | Resources required: PowerPoint and a projector. |
| 7 Legislation (continued) | <p>Discuss the implications of the Environmental Protection Act 1990 and the Water Act 2003.</p> <p>Invite an environment agency enforcement officer to explain their job role and how they enforce the Acts. Learners need to be prepared to ask questions.</p> <p>Using scenarios and the Environmental Protection Act 1990 and the Water Act 2003, ask learners to produce reasoned decisions as to whether the Acts are being infringed. They must clearly state which section of the Act they think is being breached.</p> | AC2a AC5c | CT1–3 IE1 | R1, 2 SL1–3 W1, 2 | 3 | Resources required: dependent on guest speaker; legislation, scenario cards/photo cards. |

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| 8 Legislation (continued) | <p>Discuss the implications of the Countryside and Rights of Way (CRoW) Act 2000.</p> <p>Working in small groups, ask learners to identify local footpaths, bridle paths and access to recreational spaces in their local area. Discuss who is responsible for maintenance.</p> <p>Invite a guest speaker from a ramblers' association. Learners need to be prepared to ask questions.</p> <p>In pairs, learners should discuss open access and draw up their own countryside code.</p> | AC2a AC3a AC5c | CT1–3 IE1 TW1, 2 | R1, 2 SL1–3 W1, 2 | 3 | Resources required: dependent on guest speaker; legislation, maps. |
| 9 Influential organisations within the UK and worldwide | <p>Arrange for guest speakers from Greenpeace, Friends of the Earth, National Farmers' Union and the Farming and Wildlife Advisory Group. Learners need to consider how these organisations influence environmental activities and use of habitats. Create a circus style activity in which learners rotate stations.</p> <p>Working in pairs, ask learners to produce a poster that outlines the roles of one of the four organisations.</p> | AC2b | CT1–3 IE1 TW1, 2 | R1, 2 SL1–3 W1, 2 | 3 | Resources required: dependent on guest speaker; poster materials. |
| 10 Visit to a Linking Environment and Farming (LEAF) demonstration farm | <p>Arrange for a visit to a LEAF demonstration farm.</p> <p>Ask learners to produce a report on the produce of the farm, methods of conservation, sustainability and the steps taken to increase the biodiversity of the area.</p> | AC2b | CT1–3 IE1 SM2, 3 | W1, 2 | 3 | Resources required: transport, computers. Give the speaker clear guidance on the discussion points to ensure all the relevant learning outcomes are covered. |

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| 11 Investigation into the role of the local wildlife trust | Arrange a visit to a local wildlife trust centre. Ask for a representative to give a tour of the grounds and discuss their current projects. | AC2b | CT1–3 IE1 | SL1 | 3 | Resources required: transport. Give the tour guide clear guidance on the subject matter to ensure all the relevant learning outcomes are covered. |
| 12 Revision | In the form of a presentation, look at all the key groups investigated and link them to the situations/industries over which they have the most influence. | AC2b | CT1–3 IE1 TW1, 2 | R1, 2 SL1–3 W1, 2 Use ICT 1.1, 2.3 DPC ICT 1.1, 1.3, 1.5, 3.2 | 3 | Resources required: computers. |
| 13 Reduce, reuse, recycle | With learners, take a look at everyday items and what happens to them after they are discarded. Ask learners to bring in some samples. Give each learner one item from the sample box and ask them to suggest a method for reusing or recycling it. If neither is viable, learners need to give a detailed reason. | AC2d | CT1–3 IE1 RL3 | R1, 2 SL1–3 W1, 2 | 3 | Resources required: box full of things we use every day, SMART Board. |

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| 14 Recycling centres | <p>Investigate the local council's policy that ensures the Waste Strategy 2007 is met.</p> <p>Ask learners to produce a leaflet on behalf of the local council to detail the targets set by the council. Learners should look at whether the council has met previous years' targets.</p> <p>Learners should then produce a map of where the local recycling centres are, stating the types of waste recycling available. Ask learners to look for recycling of long-life light bulbs.</p> | AC2a AC4a | CT1–3 IE1 | R1, 2 SL1–3 W1, 2 Use ICT 1.1, 2.3 DPC ICT 1.1, 1.3, 1.5, 3.2 | 3 | Resources required: local council's waste strategy, computers, map of local area. |
| 15 Land-use mapping | <p>Guide learners in mapping the industries and businesses in the local area on a transect. They should look at how the land is managed and the use of water. Ask learners to produce a report on the related activities of the businesses, including those abroad, eg clothes shops.</p> <p>Give special attention to the effect on plant and animal communities.</p> | AC3a AC3b AC4a AC5c | CT1–3 IE1 TW1, 2 | R1, 2 SL1–3 W1, 2 Use ICT 1.1, 2.3 DPC ICT 1.1, 1.3, 1.5, 3.2 | 3 | Resources required: local maps, list of industries in the local area. |

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| 16 Local power generation plant | <p>Find a case study of a local power generation plant that is changing its processes to lessen its environmental impact.</p> <p>Learners need to evaluate the twin pressures of economic and environmental sustainability in a report, which should include the monetary costs of the changes and how this has positively affected the reduction in environmental impact.</p> <p>Using information about carbon footprint, learners should evaluate the efficiencies gained and the reduction in environmental pollution, paying particular attention to any improvements to the habitat surrounding the plant.</p> | AC4a AC5a AC5b | CT1– IE1 RL3 | R1, 2 SL1–3 W1, 2 | 3 | <p>Resources required: case study from local power generation plant, computers.</p> <p>Links to Unit 8: Sources and uses of energy.</p> |
| 17 Visit to a local reservoir | <p>Arrange a visit to a local reservoir. Using a map of the area, learners need to consider the impact to the local environment if the reservoir were to be expanded and investigate how environmental impacts can be managed/mitigated.</p> <p>This report should be in the form of a well-annotated poster.</p> | AC5a AC5b AC5c | CT1–3 IE1 TW1, 2 | R1, 2 SL1–3 W1, 2 | 3 | <p>Resources required: transport, map, poster materials.</p> |

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| 18 Post-festival survey of park | <p>Ask learners to look into the environmental impact of lots of people after a festival.</p> <p>Learners should pretend that they are a member of an opposing environmental group. They need to look at the way the area is left after the festival and the length of time it takes to return it to a healthy state.</p> <p>Learners will then put together a presentation as to why this festival should not be allowed to go ahead due to the damage caused and the additional resources used.</p> | AC5a AC5b AC5c | CT1–3 EP1-6 IE1 TW1, 2 | R1, 2 SL1–3 W1, 2 Use ICT 1.1, 2.3 DPC ICT 1.1, 1.3, 1.5, 3.2 | 3 | <p>Resources required: multimedia images of festivals sites before and after the festivals, materials for presentations.</p> <p>Links to Unit 5: Plants and animals: their role in society.</p> |
| 19 Forestry commission | <p>Talk and walk from the Forestry Commission and Sustainable forestry.</p> <p>From the visit learners need to produce a report on the methods of conservation sustainability and steps taken to increase the biodiversity of the area.</p> | AC5b | CT1–3 IE1 SM2, 3 | SL1 W1, 2 Use ICT 1.1, 2.3 | 3 | Resources required: transport, computers to produce report. |
| 20 Sustainability of the fishing industry | <p>Ask learners to take a look at fisheries. They need to consider the sustainability of the industry and the effect of sustainability on society.</p> <p>Their investigation must consider the sustainability (environmental and economic) of energy, water, fish and materials. The survey of usage must cover the time from setting sail to the product being sold to a shop. For the whole of the process, learners must identify ways to reduce resource consumption and maintenance of stock levels.</p> | AC5c | CT1–3 IE1 SM2, 3 | SL1 W2, 3, 5 Use ICT 1.1, 2.3 | 3 | Resources required: case studies on the fisheries being used, population distributions, documented activities of farming. |
| 21 Revision | Set a mock examination for revision purposes. | All | | | 3 | |