

16+	Study Modules	Brief Description	Equipment Includes:	Centre	AQA
	Agriculture and Conservation	On a walk through mixed farmland, with field lectures discussing the surrounding landscape, students study intensive and extensive food production. Issues include monoculture, pesticide and fertilizer use, field size and hedgerow loss, and their impact on species diversity and loss of stability is considered. The advantages and disadvantages of organic farming are discussed along with the uses of biological pest control and integrated pest management. Information on aquaculture and Lamlash Bay – Britain's first 'No Take Zone' for fishing - can be included.	Activity sheets, digital cameras.	Loch Ranza	AQA GCE Geography AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Human Options: Food Supply Issues. AQA Environmental Studies GCE AS/A level: Unit 4 ENV54 Biological Resources and Sustainability: 3.4.2: Environments and social impacts of agriculture.
	Ecological Succession	By performing accurate and detailed line transects students can observe the changes in succession in relation to biotic and abiotic factors. They also begin to appreciate the importance of conservation and management of fragile ecosystems. This unit is ideal for students undertaking projects with an emphasis on experimental design, accurate and consistent data collection, hypothesis testing and statistical analysis	Activity sheets, digital camera, Pocket PC, infiltration kit, pH kit, soil thermometer, moisture meter, profiling kit, quadrat, plant ID guides, Pocket ID books, anemometer.	Barton Hall, Little Canada, Osmington Bay	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.3, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Ecosystems in the British Isles, Ecological Succession	An introductory session highlights the variety of types of succession which can take place, the stages we move through and the abiotic factors which have an influence. Practical fieldwork involves data collection on a line transect using indicator species to identify seral stages. Classwork uses field data to produce a species distribution graph. Students can compare this with expected results and suggest reasons for variation.	Activity sheets, digital camera, PC, infiltration kit, pH kit, soil thermometer, moisture meter, tape measure, Profiling Kit, quadrat, plant ID guides, Pocket ID books, anemometer.	Loch Ranza	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.3, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Ecosystems in the British Isles, The Interrelationships of Soils and Topography	Fieldwork consists of a transect covering both north and south facing slopes. Data on soil, climate, vegetation, topography and land use is gathered at a number of sites and in a variety of habitats including deciduous woodland and heathland. Data is processed using IT, and statistical calculations include Chi-Square and Spearman's Rank tests.	Activity sheets, digital camera, PC, infiltration kit, soil thermometer, moisture meter, pH kit, profiling kit, quadrats, plant ID guides, Pocket ID books, anemometer.	Loch Ranza	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.3, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Farming and Biodiversity	A short walk through the countryside is taken to gain an understanding of man's uses of land. This unit addresses man's influence in terms of historical change, sustainability and biodiversity. Farming methods are reviewed in the context of nutrient cycling, the water cycle and geology. The concepts attached to the use of pesticides, herbicides and other pest control methods are discussed, along with the attendant issues of non-native and alien species. In addition, there will be the opportunity to examine concepts such as countryside access and wildlife corridors.	Activity sheets, digital cameras, soil auger.	Barton Hall, Little Canada and Osmington Bay	AQA Environmental Studies GCE AS/A level: Unit 4 ENV54 Biological Resources and Sustainability: 3.4.2: Environments and social impacts of agriculture.
	Heathland Ecology and Management	An investigation of open heathland is undertaken. Line transects are made and measurements taken including pH, light levels and soil type. Quadrats are used to examine plant species along the transect. Expected changes in diversity within physical parameters are discussed, along with the role of heathland in the nitrogen and carbon cycles. In addition, the management and land uses of the area are discussed. Data analysis and statistical tests can be used to complete a report on the investigation.	Activity sheets, digital camera, Pocket PC, infiltration kit, soil thermometer, moisture meter, pH kit, profiling kit, quadrat, plant ID guides, Pocket ID books, anemometer.	Barton Hall and Osmington Bay.	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment, Environmental change and damage (BHA only), Managing conservation (BHA only). AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.2, 3.1.3, 3.1.4, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Impacts of Grazing	This course investigates grazing pressures by comparing species diversity at different sites. An introduction explains the effects of grazing and discusses which vegetation is most susceptible to heavy grazing pressures. Management practices used to reduce pressure on damaged ecosystems are introduced with the idea of managing habitats for a variety of species. Fieldwork consists of quadrats carried out in a heavily grazed field and an ungrazed enclosure.	Activity sheets, digital camera, Pocket PC, infiltration kit, pH kit, soil thermometer, moisture meter, tape measure, quadrat, plant ID guides, Pocket ID books, anemometer.	Loch Ranza	AQA GCE Geography AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Human Options: Food Supply Issues. AQA Environmental Studies GCE AS/A level: Unit 4 ENV54 Biological Resources and Sustainability: 3.4.2: Environments and social impacts of agriculture.

	Introduction to Ecology and Sampling Techniques	The aim of this session is to familiarise students with the general principles and definitions of ecology. Sampling techniques to be used during the week are introduced in the classroom with an explanation of the theory behind quadrats and transects and the sampling methods associated with each. Students carry out a short exercise in determining optimum quadrat size. Systems used within quadrats include the ACFOR scale, % cover and point sampling.	Activity sheets, digital camera, PC, profiling kit, 100% quadrat, 10cm quadrat, identification sheets and books.	Loch Ranza	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.3, 3.1.5; 3.5 How Science Works
	Investigations and Sampling Techniques	This unit provides students with an introduction to a variety of different data collection techniques, both in theory and practically as part of an investigation. Techniques that can be covered include belt transects, line transects, random sampling, quadrats and 'mark, release and recapture'. Students' work will have an emphasis on experimental design, accurate and consistent data collection, hypothesis testing and statistical analysis.	Activity sheets, digital camera, Pocket PC, infiltration kit, pH kit, soil thermometer, moisture meter, profiling kit, quadrat, plant ID guides, Pocket ID books, anemometer.	Barton Hall, Little Canada and Osmington Bay	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.3, 3.1.5; 3.5 How Science Works
	Lithoseral and Haloseral Succession	This is a study of the colonization of a bare rock substrate. By performing accurate and detailed line transects students can observe the changes in succession. They will also begin to appreciate the importance of conservation and management of fragile ecosystems. Students test their hypotheses using Spearman's Rank Coefficient calculation to determine if there is a relationship between different environmental factors, e.g. between the pH of the soil and species number. Remaining time can be spent writing up the methodology and discussing the day's findings.	Activity sheets, digital cameras, Pocket PC, thermometer, profiling kit moisture meter, pH kit quadrat, infiltration kit, stopwatch, plant ID sheets, identification books.	Osmington Bay	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.2, 3.1.3, 3.1.4, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Marine Zonation	Horizontal succession is studied using line transects across the littoral zone to measure the percentage and/or frequency cover of the organisms. Vertical zonation studies can also be carried out, using a 10cm quadrat - vertically on the rocks - to examine changes in species number and diversity on a small scale. Both methods are ideal for students undertaking projects with an emphasis on experimental design, accurate and consistent data collection, hypothesis testing and statistical analysis alongside concepts such as Ballantine's scale of exposure.	Activity sheets, digital camera, Pocket PC, profiling equipment, 100% quadrat, 10cm quadrat, identification sheets and books, bug pots.	Barton Hall, Little Canada and Osmington Bay	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.2, 3.1.3, 3.1.5; 3.5 How Science Works
	Psammoseral Succession	A Nature Reserve system is an ideal location for studying the abiotic and biotic factors of succession over sand and the factors that affect this process. Opportunities are provided to study different approaches to sustainable development and how humans impact upon succession. Data analysis and statistical tests can be used to complete a report on the investigation.	Activity sheets, digital camera, Pocket PC, infiltration kit, pH kit, soil thermometer, moisture meter, profiling kit, quadrat, plant ID guides, Pocket ID books, anemometer.	Barton Hall and Osmington Bay.	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.2, 3.1.3, 3.1.4, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Stream Ecology	Students investigate how a river changes along its course from source to mouth, focusing on the change in invertebrate communities. Students use kick and sweep sampling alongside identification keys, recording their findings on pocket computers. Digital photographs help to identify sample sites, and the reasons for changes along the river are examined fully, including pollution levels, land use and management.	Activity sheets, Pocket PC, digital camera, channel profile kit, flow meters, sediment roundness chart, pH meters, sweep nets, bug pots, identification books and sheets.	Barton Hall, Little Canada and Osmington Bay	AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.2, 3.1.3, 3.1.5; Unit 3 ENV53 Energy Resources and Environmental Pollution: 3.3.2; 3.5 How Science Works
	Woodland Ecology	Students conduct a comparative investigation of coniferous and deciduous woodland. Line transects are made and measurements taken, including pH, light levels and soil type. Students use quadrats to examine plant species in different layers of woodland. Expected changes in diversity within physical parameters are discussed, along with the role of woodland in the nitrogen and carbon cycles.	Activity sheets, digital camera, Pocket PC, infiltration kit, pH kit, soil auger, soil thermometer, moisture meter, profiling kit, 2 quadrats, plant ID guides, Pocket ID books, anemometer, light meter.	Barton Hall, Little Canada and Osmington Bay	AQA Applied Science GCE AS/A2: A2 Unit 16 Ecology, Conservation and Recycling: The type and populations of organisms that live in a habitat, The relationships of organisms with their physical and biological environment. AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1, 3.4.7; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV51 The Living Environment: 3.1.2, 3.1.3, 3.1.4, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
il Science	Energy Resources	A brief introduction covers current energy resources used in the UK. Students then move on to focus on renewable and sustainable resources. Fieldwork identifies the most suitable location for a wind farm in the local area using environmental impact assessment techniques. In a follow-up class session students analyse and present their results to identify and justify the most suitable wind farm site.	Activity sheets, digital camera, PC, digital anemometer, light meters, hygrometers, weather stations.	Loch Ranza	AQA Environmental Studies GCE AS/A level: 3.3 Unit 3 ENV53 Energy Resources and Environmental Pollution: 3.3.1 Energy: Energy resources. 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Human Options: Energy Issues.

Environments	Freshwater Pollution	Students investigate pollution levels in a freshwater system, using biotic and abiotic factors. Moving between sample sites, they will focus primarily on the change in invertebrate communities. In addition, factors such as nitrate levels are measured. Pupils use sweep sampling and identification keys, recording their findings on pocket computers. Digital photographs help to identify sample sites and the reasons for changes between the sample sites are examined fully, including pollution levels and land use and management.	Activity sheets, digital camera, Pocket PC, bug pots, tray, flexible net, identification guides and sheets, BMWP index, pH kit, nitrate test kits.	Barton Hall, Little Canada and Osmington Bay	AQA Biology GCE AS/A level: 3.2 Unit 2: BIOL2 The variety of living organisms: 3.2.11; 3.4 Unit 4 BIOL4 Populations and environment: 3.4.1; 3.6 Unit 6 Investigative and Practical Skills in A2 Biology: 3.6.1, 3.6.2, 3.6.3, 3.6.4; 3.7 How Science Works: A, B, C, D, E, F, G, H. AQA Environmental Studies GCE AS/A level: Unit 1 ENV1 The Living Environment: 3.1.2, 3.1.3, 3.1.4, 3.1.5; Unit 2 ENV2 The Physical Environment: 3.2.2. Unit 3 ENV3 Energy Resources and Environmental Pollution: 3.3.2; 3.5 How Science Works
	Geology	People, Rocks and Landscapes	Visiting a number of localities students will see how geology, as a natural resource, can have a massive impact on the environment and character of an area. Igneous geological features can attract industries, particularly tourism but can also produce areas of natural beauty and scientific importance thereby introducing conflict over a variety of issues. Students can create a report of their findings based on the viewpoints of people living in the community.	Activity sheets, rock guides, compass clinometer, metre ruler, spirit level, digital camera.	Barton Hall
Human Geography	Coastal Investigation - including Features and Management	Students are set a long-shore drift investigation on a stretch of shingle beach with defined aims and hypotheses. Beach profiles are taken using a levelling technique. Coastal processes and features are discussed in a series of field talks including tides, coastal erosion, raised beaches and the implications of sea level change. Coastal management techniques including gabion construction and environmental impact are also studied. A section of sand dunes backed by a golf course provides a good case study of human impact.	Activity sheets, questionnaires, profiling kit, digital camera.	Loch Ranza	AQA Environmental Studies GCE AS/A level: Unit 1 ENV1 The Living Environment: 3.1.4; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Physical Options: Coastal environments; Unit 2 GEOG2 Geographical Skills; Unit 3 GEOG3 Contemporary Geographical Issues: The Human Options: Contemporary conflicts and challenges; Unit 4A GEO4A Geography Fieldwork Investigation.
	Coastal Management	Students examine the conflicts that arise from coastal erosion and the options for coastal management. They investigate different types of coastal defences through field sketches and discuss how they should be managed in the future through a decision matrix. Each option is examined through cost benefit analysis and all relevant economic, social, educational and industrial impacts are investigated and discussed.	Activity sheets, questionnaires, digital camera.	Barton Hall, Little Canada and Osmington Bay	AQA Environmental Studies GCE AS/A level: Unit 1 ENV1 The Living Environment: 3.1.4; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Physical Options: Coastal environments; Unit 2 GEOG2 Geographical Skills; Unit 3 GEOG3 Contemporary Geographical Issues: The Human Options: Contemporary conflicts and challenges; Unit 4A GEO4A Geography Fieldwork Investigation.
	Data Collection Techniques	This unit provides students with an introduction to a variety of different data collection techniques, both in theory and practically as part of an investigation. Techniques which can be covered include traffic surveys, pedestrian surveys, land use mapping, environmental assessments and questionnaires. Students' work will have an emphasis on experimental design, accurate and consistent data collection, hypothesis testing and, where appropriate, statistical analysis.	Activity sheets, digital cameras, questionnaires, land use maps.	Barton Hall, Little Canada and Osmington Bay	AQA Geography GCE AS/A level: Unit 4A GEO4A Geography Fieldwork Investigation.
	Drainage Basins, Flooding and Management	Students focus on factors affecting channel flooding and the drainage basin characteristics of two rivers. Field studies include consideration of rejuvenation, interception, infiltration, rate of through-flow and storm hydrographs. A proposed housing scheme on the flood plain provides a cost/benefit analysis study and highlights river management techniques.	Activity sheets, PC, digital camera, channel profile kit, flow meters, callipers, sediment roundness chart.	Loch Ranza	AQA GCE Environmental Studies AS/A level: Unit 2 ENV2 The Physical Environment: 3.2.2, 3.5 How Science Works. AQA GCE Geography AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Physical Section: Rivers, floods and management. Unit 2 GEOG2 Geographical Skills. Unit 4A GEO4A Geography Fieldwork Investigation.
	Impacts of Tourism	Students examine the reasons for the historical development of a tourist resort. Effects of recreational pressure on local employment, land use conflicts, the physical environment and traffic congestion are considered. Data can be collected through land use mapping, pedestrian surveys and traffic counts. Information collected can be analysed through classification of land use maps and collation of questionnaires. A report can be written and a management plan produced for future work.	Activity sheets, digital cameras, questionnaires, land use maps.	Barton Hall, Little Canada and Osmington Bay	AQA Environmental Studies GCE AS/A level: Unit 1 ENV1 The Living Environment: 3.1.4; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Human Section: Population Change; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation. AQA Travel and Tourism AS/A level: AS Unit 6 Tourism in the UK: Factors affecting the popularity of tourism in the UK, Statistics on tourism, Tourism in a local tourist board region; A2 Unit 11 Impacts of Tourism: Environmental impacts, Economic impacts, Social/cultural impacts, Impacts on tourism planning.
	Investigation Skills and Sampling Techniques	This option equips students with the necessary skills to describe, under exam conditions, how they would carry out a geographical investigation. The stages of an investigation are followed from title and hypothesis setting to evaluation and conclusions. Fieldwork techniques on a salt marsh area focus on the appropriate use of a wide variety of sampling methods and techniques including, choosing the right size of quadrat for the area and habitat and selecting between quantitative and qualitative data.	Activity sheets, digital cameras, quadrats, profiling kit, questionnaires, land use maps.	Loch Ranza	AQA Environmental Studies GCE AS/A level: Unit 1 ENV1 The Living Environment: 3.1.3, 3.1.5; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Ecosystems: Change and Challenge; Unit 4A GEO4A Geography Fieldwork Investigation.
	Management and Conflicts	Students discover how landscape features, as a natural resource, can have a massive impact on the environment and character of an area. Landscape features can generate income but can also produce areas of natural beauty and scientific importance, thereby introducing conflict over a variety of issues. Students can create a report of their findings based on the viewpoints of people living in the community.	Activity sheets, digital cameras, questionnaires, land use maps.	Barton Hall, Little Canada and Osmington Bay	AQA Environmental Studies GCE AS/A level: Unit 1 ENV1 The Living Environment: 3.1.4; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Human Options: Contemporary conflicts and challenges; Unit 4A GEO4A Geography Fieldwork Investigation.
	Population and Rural Settlements	A case study for population change, sustainability and rurality. This option sets out clear aims and objectives which are followed up by data collection in a number of local settlements. Techniques include place check, service assessments, questionnaires and landscape character assessments. Students study how the local population has changed over time using GIS generated data, and research solutions to population change problems.	Activity sheets, questionnaires, digital camera.	Loch Ranza	AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Human Section: Population Change; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation.

Rural and Urban Issues	For rural issues, students investigate the changing function of a village over time and the issues associated with rural settlements. Geographical techniques are used to illustrate how an area has changed over time. Evidence of the impact of other settlements and the rural employment levels and type are discussed. For urban issues, producing land use classification maps of town centres allows students to investigate patterns in retail settlements and settlement function. Development of towns over time can be demonstrated through a study of building type and the CBD can be mapped.	Activity sheets, digital cameras, questionnaires, land use maps	Barton Hall, Little Canada and Osmington Bay	AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Human Section: Population Change; Unit 2 GEOG2 Geographical Skills; Unit 3 GEOG3 Contemporary Geographical Issues: The Human Options: Contemporary conflicts and challenges; Unit 4A GEO4A Geography Fieldwork Investigation.
Rural Settlements	Students investigate the changing function of a village over time and the issues associated with rural settlements. Geographical techniques are used to formulate an image of how an area has changed over time. Evidence of the impact of other settlements and the rural employment levels and type are discussed. Using evidence including digital photos and house age comparisons, students can produce a presentation or report of their investigation, including graphical and numerical data.	Activity sheets, digital cameras, land use maps.	Barton Hall, Little Canada and Osmington Bay	AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Human Section: Population Change; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation.
Tourism and Environments	Students examine the development of a tourist location. Landscape features and local history are considered alongside the effects of recreational pressure on local employment, land use conflicts, the physical environment and traffic congestion. Data can be collected through land use mapping, pedestrian surveys and traffic counts. Information collected can be analysed through classification of land use maps and collation of questionnaires and then included in a written report.	Activity sheets, digital cameras, questionnaires, land use maps.	Barton Hall, Little Canada and Osmington Bay	AQA Environmental Studies GCE AS/A level: Unit 1 ENVS1 The Living Environment: 3.1.4; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Human Section: Population Change; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation. AQA Travel and Tourism AS/A level: AS Unit 6 Tourism in the UK: Factors affecting the popularity of tourism in the UK, Statistics on tourism, Tourism in a local tourist board region; A2 Unit 11 Impacts of Tourism: Environmental impacts, Economic impacts, Social/cultural impacts, Impacts on tourism planning.
Urban Settlements	Producing land use classification maps of town centres allows students to recognise and investigate patterns in retail settlements and settlement function. Development of towns over time can be demonstrated through a study of building type and the CBD can be mapped. A report or presentation incorporates data collected. Alternatively land use maps can be completed and classification discussed.	Activity sheets, digital cameras, questionnaires, land use maps.	Barton Hall, Little Canada and Osmington Bay	AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Human Section: Population Change; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation.

Physical Geography	Coastal Processes and Features	By working as part of a team pupils profile a beach, taking accurate measurements, which are entered onto a pocket computer. Pupils discuss beach formation and the reasons why beaches differ in shape and sediment size. Pupils then discuss the results they have obtained and suggest why sediment size varies in relation to its position on the beach. Simple experiments allow observations of long shore drift and wave refraction.	Activity sheets, profiling kit, digital camera.	Barton Hall, Little Canada and Osmington Bay	AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Physical Options: Coastal environments; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation.
	Cold Environments	Superb examples of cold environment features are discussed in a series of field talks. Topics include glacial and fluvioglacial landforms and their formation. A case study is made of a classic glacial valley, focusing on its formation in the past and its uses today. This includes consideration of UK glacial history, trigger theories, glacier characteristics, features of erosion and deposition.	Activity sheets, digital camera.	Loch Ranza	AQA GCE Geography AS/A level: Unit 1 GEOG1 Physical and Human Geography: The Physical Options: Cold environments. Unit 2 GEOG2 Geographical Skills. Unit 4A GEO4A Geography Fieldwork Investigation.
	Earth Hazards: Earthquakes and Volcanoes	This option involves a series of field talks focusing on processes and features of vulcanicity and plate tectonics. Aspects covered include extrusive landforms, intrusive landforms, types of plate boundary and the impact of volcanic activity on the landscape and population.	Activity sheets, rock guides, compass clinometer, spirit level, metre ruler, digital camera.	Loch Ranza	AQA GCE Geography AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Plate tectonics and associated hazards
	Rivers	The form and function of rivers can be studied from source to mouth in this river investigation, including width, depth, velocity, hydraulic radius, wetted perimeter, land use, surface run off, sediment size and common fluvial formations such as point bars, meanders, river cliffs and braided channels. Students can also relate their findings to the human influence upon the sample sites. The data gathered in the field and digital photos taken can be used to write-up the day's findings.	Activity sheets, Pocket PC, digital camera, clinometer, channel profile kit, flow meters, callipers, sediment roundness chart, ranging poles.	Barton Hall, Little Canada, Lochranza, Osmington Bay	AQA Environmental Studies GCE AS/A level: Unit 2 ENVS2 The Physical Environment: 3.2.2; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Physical Section: Rivers, floods and management; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation.
	Sediment Analysis	An opportunity for a practical investigation linked to Cold Environments, Rivers or Coastal Investigation. Exposures of sediment are analysed at five locations – three of known origin and two unknown. Fieldwork techniques assess size, shape, orientation and stratification. Graphical presentation, statistical and IT analysis help interpret data and identify the environment of deposition.	Activity sheets, sediment charts, callipers, digital camera.	Loch Ranza	AQA Environmental Studies GCE AS/A level: Unit 2 ENVS2 The Physical Environment: 3.2.2; 3.5 How Science Works. AQA Geography GCE AS/A level: Unit 1 GEOG1 Physical and Human Geography: Core Physical Section: Rivers, floods and management; the Physical Options: Cold environments; The Physical Options: Coastal environments; Unit 2 GEOG2 Geographical Skills; Unit 4A GEO4A Geography Fieldwork Investigation.
	Weather and Climate, Micro-climate Studies (Loch Ranza only)	An introductory talk highlights factors influencing the UK climate. Fieldwork takes place at several locations across the local area providing a variety of contrasts of vegetation, slope, altitude and built environment.	Activity sheets, digital camera, PC, digital anemometer, light meters, hygrometers, weather stations.	Loch Ranza	AQA GCE Geography AS/A level: Unit 3 GEOG3 Contemporary Geographical Issues: The Physical Options: Weather and Climate and Associated Hazards

