

34 to 35	Study Modules	Brief Description	Equipment Includes:	Centre	SQA Standard Arrangements Units Covered
Biology	Comparative Ecological Investigation	Undertaking a comparative investigation of different habitats, pupils examine how plant communities are affected by biotic and abiotic factors. Pupils identify plants and their adaptations.	Activity sheets, digital camera, infiltration kit, soil thermometer, moisture meter, pH kit, profiling kit, plant ID guides, Pocket ID books, anemometer.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy for the Sun for Living things 1, 2, 3; 2 Food Chains and Food webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4.
	Ecosystems	Students examine how the relationships between vegetation, climate, topography and landscape create different habitats. They study a range of habitats, the differences between them and the interconnections of biotic and abiotic factors that make each one unique. Discussions include the impacts of land uses including farming, tourism and deer stalking.	Activity sheets, digital camera, Pocket PC, infiltration kit, soil thermometer, moisture meter, profiling kit, plant ID guides, Pocket ID books, anemometer.	Loch Ranza	SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10, 12; Sub-topic c - Control and Management: Suggested learning activities: 18. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy for the Sun for Living things 1, 2, 3; 2 Food Chains and Food webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4. SCE Standard Grade Geography: The Physical Environment: Key Ideas 4, 5, 6. The Human Environment: Key Idea 9.
	Farming and Biodiversity	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, species diversity and geology.	Activity sheets, digital cameras, soil auger.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas 4, 5. The Human environment: Key Ideas: 9 Techniques: Gathering techniques: Field sketching, measuring, observing and recording.
	Lithoseral and Haloseral 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.	Activity sheets, digital cameras, Pocket PC, thermometer, profiling kit moisture meter, pH kit, quadrat, infiltration kit, plant ID sheets, identification books.	Osmington Bay only	SCE Standard Grade in Geography: The Physical Environment: Key idea: 1. Techniques: Gathering techniques: Measuring, observing and recording; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up Processing techniques: Drawing graphs, Drawing cross-sections/transects). SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10, 12; Sub-topic c - Control and Management: Suggested learning activities: 18. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy for the Sun for Living things 1, 2, 3; 2 Food Chains and Food webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4.
	Marine Zonation	At a chosen local beach pupils explore marine life. Starting in the splash zone and working through the upper and lower intertidal zones, pupils are encouraged to study and collect as many organisms as possible and also discuss their adaptations and the stress factors affecting these numbers, zone by zone.	Activity sheets, digital camera, Pocket PC, profiling equipment, quadrats, identification sheets and books, trays, bug pots.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10, 12; Sub-topic c - Control and Management: Suggested learning activities: 15. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy for the Sun for Living things 1, 2, 3; 2 Food Chains and Food webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4.
	Psammoseral Succession	A transect of a sand dune system reveals trends in biotic and abiotic factors. Pupils can also investigate the human pressures on a delicate system and observe measures put in place to alleviate this human impact.	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	SCE Standard Grade in Geography: The Physical Environment: Key idea: 1. Techniques: Gathering techniques: Measuring, observing and recording; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up Processing techniques: Drawing graphs, Drawing cross-sections/transects). SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10, 12; Sub-topic c - Control and Management: Suggested learning activities: 18. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy for the Sun for Living things 1, 2, 3; 2 Food Chains and Food webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4.
	Stream Ecology	Pupils investigate how a river changes along its course from source to mouth by focussing on the change in invertebrate communities. The reasons for changes along the river are examined fully, including pollution levels, land use and management.	Activity sheets, Pocket PC, digital camera, flow meters, sediment roundness chart, pH meters, sweep nets, tray, bug pots, identification books and sheets.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas: 1, 4, 5. Techniques: Gathering techniques: Measuring, observing and recording; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up Processing techniques: Drawing graphs). SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10, 12; Sub-topic c - Control and Management: Suggested learning activities: 15, 16, 17. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy from the Sun for Living Things 1, 2, 3; 2 Food Chains and Food Webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4; 5 Pollution 2, 6, 7, 12.
	Woodland Ecology	A comparative investigation of coniferous and deciduous or mixed woodland is undertaken. 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.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6; Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10, 12; Sub-topic c - Control and Management: Suggested learning activities: 18. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy for the Sun for Living things 1, 2, 3; 2 Food Chains and Food webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4.

	Freshwater Pollution	Pupils investigate pollution levels in a freshwater system, using both biotic and abiotic factors. Moving between sample sites, they will focus primarily on the change in invertebrate communities. 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, pipette, flexible net, identification guides and sheets, BMWP index, pH test kits, nitrate test kits.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas: 1. Techniques: Gathering techniques: Measuring, observing and recording; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up Processing techniques: Drawing graphs). SCE Standard Grade Biology: Topic 1: Sub-topic a - Investigating an Ecosystem: Suggested learning activities: 1, 2, 3, 4, 5, 6, Sub-topic B - How it Works: Suggested learning activities: 7, 8, 9, 10,12; Sub-topic c - Control and Management: Suggested learning activities:15, 16, 17. SCE Standard Grade Science: Topic 4: A Study of Environments: 1 Energy from the Sun for Living Things 1, 2, 3; 2 Food Chains and Food Webs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; 3 Interdependence and Populations 1, 2, 3, 4; 5 Pollution 2, 6, 7, 12.
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Geology	Geology and Landscapes	Visiting a number of sedimentary rock localities pupils will discover how geology as a natural resource can have a massive impact on the environment and character of an area. Geological features can generate income but can also produce areas of natural beauty and scientific importance, thereby introducing conflict over a variety of issues.	Activity sheets, rock guides, compass clinometer, metre ruler, digital camera.	Osmington Bay, Little Canada	SCE Standard Grade in Geography: The Physical Environment Key idea 1, 4, 5. The Human environment: Key Ideas: 7, 10, 11. Techniques: Gathering techniques: Fieldsketching.
	Geology, Rocks and Fossils	Pupils are offered the chance to examine rock formation under a range of environmental conditions. Pupils then have the opportunity to hunt for fossils and learn about the tectonic events that have shaped the land.	Activity sheets, sample fossils, fossil and rock guides, digital camera.	Osmington Bay, Little Canada	SCE Standard Grade in Geography: The Physical Environment: Key ideas: 1.
	People, Rocks and Landscapes	Visiting a number of igneous rock localities pupils will see how geology as a natural resource can have a massive impact on the environment and character of an area. Geological features can generate income but can also produce areas of natural beauty and scientific importance, thereby introducing conflict over a variety of issues.	Activity sheets, rock guides, digital camera.	Barton Hall	SCE Standard Grade in Geography: The Physical Environment Key idea 1, 4, 5. The Human environment: Key Ideas: 7, 10, 11. Techniques: Gathering techniques: Fieldsketching.

Human Geography	Coastal Management	Pupils examine the conflicts that arise from coastal erosion and the options for coastal management. They investigate different types of coastal defences and management systems and discuss how the coastal area should be managed in the future.	Activity sheets, digital camera.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas: 1, 4. Techniques: Gathering Techniques: Fieldsketching, Observing and recording.
	Coastal Processes, Features and Management	Coastal erosion and deposition are studied as part of a coastal walk. The influence of rock types on the coastal environment and the formation of simple igneous features can be observed. An area of sand dunes backed by a golf course provides a case study of human impact on the coastal environment and the successes and failures of management techniques.	Activity sheets, digital camera, profiling kit.	Loch Ranza	SCE Standard Grade in Geography: The Physical Environment Key idea 1, 4. Techniques: Gathering techniques: Fieldsketching, Measuring, Observing and recording; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing graphs, Drawing cross-sections/transsects).
	Farming and Biodiversity	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, species diversity and geology.	Activity sheets, digital cameras, soil auger.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas 4, 5. The Human environment: Key Ideas: 9 Techniques: Gathering techniques: Field sketching, measuring, observing and recording.
	Human Impact and Conservation	Pupils are asked to redevelop a local brown-field site or area through the eyes of characters with differing views. Pupils organise and present their ideas to the group in poster, discussion or role-play form.	Activity sheets, Digital Camera	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas: 4, 5. The Human environment: Key Ideas: 7, 8, 10, 11. Techniques: Gathering Techniques: Observing and recording.
	Population and Settlement in a Rural Area	This option focuses on the impact of changing population on a rural area and the positive and negative impact of tourism. Students take the role of consultants for a developer who wishes to build a visitor attraction. Gathering information they build up a picture of villages as they are today. A cost/benefit analysis exercise will allow them to select the best site.	Activity sheets, digital cameras, questionnaires, land use maps.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key ideas 4, 5, 6. The Human Environment: Key idea 7.
	Retail Settlements Today	Pupils investigate the function and layout of a retail settlement, using various geographical techniques. Pupils investigate the location of services in relation to each other. The history of the area is investigated and discussed to demonstrate the changing function of the town over time.	Activity sheets, digital cameras, questionnaires, land use maps	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Human Environment: Key ideas: 7, 8, 11. Techniques: Recording observed information on a map, Observing and recording, compiling and using questionnaires and interviews; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing Graphs)
	Rural Settlements	Pupils 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.	Activity sheets, digital cameras, , land use maps.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment Key idea 5. The Human Environment: Key Ideas: 7, 11. Techniques: Gathering Techniques: Observing and recording.
	Tourism Investigation	Pupils examine the reasons for the historical development of a tourist resort, using a variety of data collection techniques. Effects of recreational pressure on local employment, land use conflicts, the physical environment and traffic congestion are considered.	Activity sheets, digital cameras, questionnaires, land use maps.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Human Environment: Key ideas: 7, 8, 11. Techniques: Recording observed information on a map, Observing and recording, compiling and using questionnaires and interviews; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing Graphs)
	Tourism, Changing the Rural Landscape	Students discuss the history and development of the tourist industry and its environmental impact in a rural area where it has become the dominant industry. This is followed by a fieldwork study of footpath erosion and the issues surrounding the management of visitors in an area of outstanding natural beauty. Half or full-day option.	Activity sheets, digital cameras, questionnaires, land use maps.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key ideas 4, 5, 6. The Human Environment: Key idea 7.

	Urban Settlements	Producing land use classification maps of town centres allows pupils to recognise patterns in retail settlements and settlement function. Development of towns over time can be demonstrated through a range of data collection techniques.	Activity sheets, digital cameras, , questionnaires, land use maps.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Human Environment: Key ideas: 7, 8, 11. Techniques: Recording observed information on a map, Observing and recording, compiling and using questionnaires and interviews; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing Graphs)
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Physical Geography	Coastal Management	Pupils examine the conflicts that arise from coastal erosion and the options for coastal management. They investigate different types of coastal defences and management systems and discuss how the coastal area should be managed in the future.	Activity sheets, digital camera.	Barton Hall, Little Canada, Osmington Bay	SCE Standard Grade in Geography: The Physical Environment: Key ideas: 1, 4. Techniques: Gathering Techniques: Fieldsketching, Observing and recording.
	Coastal Processes and Features	The formation of coastal features and their evolution over time is discussed using local examples. Stacks, stumps, wave-cut platforms and caves are examined and if desired a beach profile can be constructed.	Activity sheets, digital camera, Pocket PC, profiling kit.	Barton Hall, Little Canada, Osmington Bay.	SCE Standard Grade in Geography: The Physical Environment Key idea 1. Techniques: Gathering techniques: Fieldsketching, Measuring; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing graphs, Drawing cross-sections/transsects).
	Investigation Skills and Data Collection Techniques	Students are introduced to the stage-by-stage process required to create a high quality field studies based geographical investigation. They will look at a variety of different methods of surveying an area and select the best techniques and the right amount of data.	Activity sheets, digital cameras, clipboards, questionnaires, land use maps.	Loch Ranza	SCE Standard Grade Geography: Techniques: Gathering and Processing techniques.
	Rivers and Fluvial Systems	The form and functions of rivers can be studied from source to mouth in this river investigation, including meanders, floodplains and smaller formations such as point bars and river cliffs. A number of measurements such as width, depth, velocity and sediment size can be collected at a variety of sample sites.	Activity sheets, Pocket PC, digital camera, channel profile kit, flow meters, callipers, sediment roundness chart, ranging poles.	Barton Hall, Little Canada, Osmington Bay.	SCE Standard Grade in Geography: The Physical Environment Key idea 1, 4, 6. Techniques: Fieldsketching, Measuring, Observing and recording; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing graphs, Drawing cross-sections, transects).
	Rocks, Resources and Scenery	The impact of geology on the shape of the landscape and its influence on our use of the land is considered using practical examples. A wide variety of rock types can be seen on a guided walk through a fantastic, remote landscape. There are examples of current and historical uses of rocks and minerals as a resource.	Activity sheets, rock guides, compass clinometer, metre ruler, spirit level, digital camera.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key Ideas 1, 4, 5, 6.
	The Challenges of Weather and Climate	An introductory talk describes weather and climate in a UK context, including methods of data collection and display. A practical fieldwork exercise focuses on microclimates created by a variety of habitats. Students use a variety of ICT and GIS resources both outside and classroom based, as part of this study.	Activity sheets, digital camera, PC, digital anemometer, light meters, hygrometers, weather stations.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key idea 2.
	The Coastal Zone	Active coastal processes and resulting landforms are studied with specific focus on long shore drift contributing to the formation of a spit. Data is later presented, analysed and interpreted. This option provides a good introduction to fieldwork sampling techniques and data handling.	Activity sheets, digital camera, profiling kit clinometer.	Loch Ranza	SCE Standard Grade in Geography: The Physical Environment Key idea 1. Techniques: Gathering techniques: Fieldsketching, Measuring; Processing techniques: Classifying/tabulating/matrixing information. (If do ICT follow up cover: Processing techniques: Drawing graphs, Drawing cross-sections/transsects).
	The Impacts of Ice on the Landscape, Glacial Scenery	Classic features of glacial landscapes will be observed, discussed and sketched in a series of field talks. The history of glaciations within the UK and its association with global climate change will be discussed. A practical exercise analyses the content of a sediment deposit to consider its origins.	Activity sheets, rock guides, compass clinometer, metre ruler, spirit level, sediment chart, digital camera.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key Idea 1.
	The Mountain Environment	A full day guided walk into a mountain environment. This option includes discussion of landscape features, vegetation types, risk assessment, preparation, equipment, map skills, climate, challenges to people, natural hazards, human impact and management issues.	Activity sheets, rock guides, digital camera.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key Ideas 1, 4, 5, 6.
The Restless Earth	This option introduces students to features along a stretch of coastline resulting from the influence of volcanic activity and plate tectonics. The influence of different rock types on coastal landforms will also be considered.	Activity sheets, rock guides, digital camera.	Loch Ranza	SCE Standard Grade Geography: The Physical Environment: Key Ideas 1, 4.	

