

Edexcel GCSE Geography A Scheme of Work

Component 1 Topic 3: Ecosystems, biodiversity and management

Introduction

Edexcel GCSE Geography A Geographical Themes and Challenges offers a thematic approach to studying geography and the content is split by physical and human geography. As with all GCSEs, the guided learning hours are 120 hours over two years. This document provides a sample scheme of work for teaching Component 1 Topic 3 that can be adapted by centres to fit their timetabling and staffing arrangements. It is meant as an example approach only and is not intended to be prescriptive. This scheme of work follows the order of the content in the Geography A specification. This document can be edited and updated over time to develop a resource bank.

The scheme of work contains suggestions for resources that you can use to support your teaching. These are suggestions only of material you may find useful and you are encouraged to use a wide range of resources that suit the needs of your students.

Overview of Component 1

- Component 1 is worth 37.5% of the GCSE.
- All students are required to study 3 topics.
- Topic 1: The changing landscapes of the UK.
- Topic 2: Weather hazards and climate change.
- Topic 3: Ecosystems, biodiversity and management.
- You need to allow roughly 45 hours to teach Component 1 and roughly 15 hours to teach each topic.

Component 1 will be assessed in Paper 1, which is worth 37.5% of the GCSE assessment and is 1 hour 30 minutes in duration. The paper is marked out of 94. The sample assessment materials can be used for question practice to enable students to build up the confidence and skills as part of their revision and exam practice.

Health and safety

The practical work and fieldwork suggested within the scheme of work are those which we believe are not banned or restricted in any way and are still currently used in most schools and colleges. We advise teachers and technicians to discuss the merits of the suggested practical work and fieldwork when deciding which to carry out and how they will be carried out. You may have ideas for practical work and fieldwork which we have not suggested but would work just as well. As with all practical work and fieldwork, a risk assessment is expected as part of good health and safety practice in all centres. Reference to health and safety in the field is made in the specification.

Scheme of Work for Component 1, Topic 3: Ecosystems, biodiversity and management

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources					
1 lesson (1 hour)	<p>Key idea 3.1: Large-scale ecosystems are found in different parts of the world and are important.</p> <p>Suggested learning objectives: To understand where the worlds large scale ecosystems are and be able to draw and identify them on a world map.</p>	<p>3.1a: Distributions and characteristics of the world’s large-scale ecosystems (tropical, temperate and boreal forests, tropical and temperate grasslands, desserts and tundra).</p> <p>Key words Ecosystem Biome</p>	Global	Use of world map to show location of global biomes.	<p>Starter</p> <ul style="list-style-type: none"> Students to find out what an ecosystem or biome is by asking their teacher questions. Yes/No game. <p>Main activity</p> <ul style="list-style-type: none"> Study a biomes map similar to ones that can be found at www.worldbiomes.com or https://askabiologist.asu.edu/sites/default/files/resources/articles/biomes/world-biomes-map.gif Students copy the major biomes onto a blank outline map of the world. They must include the key and while adding the biomes be think about what the climate is like in each of the areas. They can then describe the distribution. Students to research each biome and complete this table. Information can be obtained from a student Atlas or websites such as this. http://www.blueplanetbiomes.org/world_biomes.htm <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 15%;">Biome</td> <td style="width: 15%;">Precipitation</td> <td style="width: 15%;">Temperature</td> <td style="width: 15%;">Vegetation</td> <td style="width: 15%;">Location</td> </tr> </table> <p>Plenary</p> <ul style="list-style-type: none"> Students to play a game of ‘What am I’ in pairs. Guess the biome each person is describing. 	Biome	Precipitation	Temperature	Vegetation	Location
					Biome	Precipitation	Temperature	Vegetation	Location	
1 lesson (1 hour)	<p>Key idea 3.1: Large-scale ecosystems are found in different parts of the world and are important.</p>	<p>3.1b: The role of climate and local factors (soils and altitude) in influencing the distribution of different large-scale ecosystems.</p>	Global	Comparing climate graphs for different biomes.	<p>Starter</p> <ul style="list-style-type: none"> Using this link from the Met Office website: http://www.metoffice.gov.uk/climate-guide/climate/zones Students to annotate the map they produced last lesson with the climate characteristics for each Biome. 					

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	<p>Suggested learning objectives: To learn the importance of climate in influencing the type and characteristics of biomes. Also consider the role of local factors such as altitude and soils.</p>	<p>Key words: Climate Distribution Altitude</p>			<p>Main activity</p> <ul style="list-style-type: none"> Using this link below from http://www.ucmp.berkeley.edu/http://www.ucmp.berkeley.edu/glossary/gloss5/biome/ Students to suggest reasons for the distribution. Issue students a set of cards. Students to sort cards out into climatic factors and local factors that influence the distribution of biomes. E.g. ocean currents, proximity to sea, altitude, soils, temperature, precipitation, light intensity, winds, etc. Students to suggest how each of these may influence different biomes. Using the image of biomes mapped against precipitation and temperature that can be found on this or a similar website: https://upload.wikimedia.org/wikipedia/en/2/29/PrecipitationTempBiomes.jpg Students explain the relationship between temperature and precipitation. <p>Plenary</p> <ul style="list-style-type: none"> Show a series of photographs of the world's major biomes. Ask students to identify them.
1 lesson (1 hour)	<p>Key idea 3.2: The biosphere is a vital system.</p> <p>Suggested learning objectives: To understand the important role that global ecosystems play</p>	<p>3.2a: How the biosphere provides resources for people (food, medicine, building materials and fuel resources) but it is also increasingly exploited commercially for energy, water and mineral resources.</p>	Global		<p>Starter</p> <ul style="list-style-type: none"> Define ecosystems goods and services. Use the 'Ecosystem services' image from the Millennium Ecosystem Assessment Report (http://www.millenniumassessment.org/en/Index-2.html) to help students come up with a definition. Study the image. Students to list different goods and services that they have used this week that could be linked back to a global biome.

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	<p>in providing goods and services for people.</p> <p>To know that ecosystems are also exploited by humans and so getting the balance right between consumption and conservation is important.</p>	<p>Key words: Biosphere Goods and services Overexploitation Resources</p>			<p>Main activity Explain the range and value of goods provided by named ecosystems/biomes.</p> <ul style="list-style-type: none"> Produce a spider diagram of goods provided by a named biome/ecosystem. Either Tropical Rain Forest or Temperate Deciduous Forest. Students to research 3 goods and services provided by either Tropical Rain Forest or Temperate Deciduous Forest. These links from the Rain Forest Alliance website City of London website would provide a good starting point, http://www.rainforest-alliance.org/kids/facts/daily-lives and http://www.cityoflondon.gov.uk/things-to-do/green-spaces/epping-forest/Pages/default.aspx Produce a large poster in groups to show what these goods and services are and how these resources are being increasingly exploited and how this is happening. Students to feedback their finding to the rest of the class. <p>Plenary</p> <ul style="list-style-type: none"> Evaluate which goods and services are at most risk from exploitation, Rank them in order of severity.
1 lesson (1 hour)	<p>Key idea 3.3: The UK has its own variety of distinctive ecosystems that it relies on.</p> <p>Suggested learning objectives:</p>	<p>3.3a: Distribution and characteristics of the UK's main terrestrial ecosystems (moorlands, heaths, woodlands, wetlands).</p> <p>Key words: Terrestrial Moorlands</p>	UK	Interpret GIS maps	<p>Starter The UK National Ecosystem Assessment report gives some good background for teachers.</p> <ul style="list-style-type: none"> Show some images of UK moorlands, heaths, woodlands and wetlands. Describe the characteristics. <p>Main activity</p>

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	To understand where the UK's main terrestrial ecosystems are and their characteristics. It is also an opportunity to integrate the use of GIS by mapping and locating them.	Heathland Woodlands Wetlands			<p>This is a useful resource: The UK National Ecosystem Assessment. http://uknea.unep-wcmc.org/Home/tabid/38/Default.aspx</p> <p>Use the map from page 4 from the UK National Ecosystem Assessment Report, showing broad UK habitats: http://uknea.unep-wcmc.org/LinkClick.aspx?fileticket=BNpVOJWKNxA%3d&tabid=82</p> <ul style="list-style-type: none"> Describe the distribution of the main terrestrial ecosystems. Class to split into groups. Each group researches one of the ecosystems. <ol style="list-style-type: none"> Moorlands Heathlands Woodlands Wetlands. <p>Produce a PowerPoint presentation or poster to show the main characteristics. Include information on vegetation, animals, insects, weather, local geography, topography etc.</p> <p>Plenary</p> <ul style="list-style-type: none"> Present findings back to the rest of the class in the form of class presentations either in Poster form or PowerPoint.
1 lesson (1 hour)	<p>Key idea 3.3: The UK has its own variety of distinctive ecosystems that it relies on.</p> <p>Suggested learning objectives: To understand the importance of the UK's</p>	<p>3.3b: Importance of marine ecosystems to the UK as a resource and how human activities are degrading them.</p> <p>Key words: Marine Exploitation Goods and services degradation</p>	UK		<p>Starter</p> <ul style="list-style-type: none"> The UK Marine National Ecosystem Assessment report gives some good background for teachers: http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx Use Figure 12.4 <i>Examples of the goods, services and benefits from marine habitats provided to human well-being</i> from page 470 of the report. Discuss the importance of our marine ecosystems. Ask a few enquiry questions: How do we use them? What importance do they have to people and the economy?

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	marine ecosystems and the importance of getting the balance right between resource use, exploitation and degradation.				<p>Main activity The Marine Management organisation is a useful website and they have various clips on YouTube. https://www.gov.uk/government/organisations/marine-management-organisation</p> <ul style="list-style-type: none"> • Show some of the clips or the website and as students watch ask them to make a list of all the ways in which our marine environment may be threatened. Consider the importance of marine ecosystems for bathing waters, recreation, energy, transport, fisheries and overfishing, sea birds, tourism, oil spills, etc. • Find and watch a news clip of the Sea Empress oil spill disaster on YouTube. Discuss the impact that this had on the marine ecosystems. • Students to produce a factsheet of one aspect of the UK's marine ecosystem. Characteristics, importance, how humans benefit and how we are degrading the ecosystem. • Present findings back to the rest of the class. <p>Plenary</p> <ul style="list-style-type: none"> • Students to pick an image out of a hat of a UK marine ecosystem. They are to describe how it may be used as a resource and how it is under threat.
1 lesson (1 hour)	<p>Key idea 3.4: Tropical rainforests show a range of distinguishing features.</p> <p>Suggested learning objectives:</p>	<p>3.4a: Biotic and abiotic characteristics of the tropical rainforest ecosystem (climate, soils, water, plants, animals and humans).</p> <p>Key words: Biodiversity Biotic</p>	Amazon Tropical Rain Forest	Use and interpretation of nutrient cycle diagrams and food web diagrams.	<p>Starter</p> <ul style="list-style-type: none"> • Call my bluff - give students three possible definitions for biotic and abiotic. They should work in pairs to decide which definition is the correct one for each term. <p>Main activity</p> <ul style="list-style-type: none"> • Show some images of the Amazon or video clips. There are many on BBC Class Clips or YouTube to get students enthused. • Students to describe the characteristics.

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	<p>To know the characteristics of the tropical rain forest and how nutrients are cycled within the ecosystem.</p> <p>To understand how energy can be passed on through the ecosystem.</p>	<p>Abiotic</p> <p>3.4b: The interdependence of biotic and abiotic characteristics (climate, soils, water, plants, animals and humans) and the nutrient cycle (Gersmehl model).</p> <p>Key words: Nutrient cycling Energy flows</p>			<ul style="list-style-type: none"> • Make a list of all the biotic and abiotic factors for the tropical rain forest. Explain how these interact to enable the rain forest to function properly. • Issue students with a blank Gersmehl model for the tropical rain forest - http://image.slideserve.com/639310/model-of-the-mineral-nutrient-cycle-developed-by-p-f-gersmehl-in-1976-n.jpg Make sure the circles for biomass, soil and litter are the appropriate size. • There is a good example on slide 18 of this presentation - http://www.slideshare.net/ecumene/ecosystems-3-nutrient-cycle-presentation Teacher to guide students through model to show nutrients and energy are circulated within the ecosystem. How nutrients can be added or lost. • Discuss with students about how this could be disrupted. • Imagine if the Amazon has been deforested. Students now draw a Gersmehl model to show the changes after deforestation. <p>Plenary</p> <ul style="list-style-type: none"> • Hangman – In pairs, choose some key words from this lesson e.g. biomass, abiotic etc. Play a quick game of hangman to finish.
1 lesson (1 hour)	<p>Key idea 3.4: Tropical rainforests show a range of distinguishing features.</p> <p>Suggested learning objectives:</p>	<p>3.4c: Why rainforests have very high biodiversity and how plants (stratified layers, buttress roots, drip tips) and animals (strong limbs, modified wings and beaks, camouflage) are</p>	Amazon Tropical Rain Forest		<p>Starter</p> <ul style="list-style-type: none"> • Refer back to Lesson 1. Discuss what the climate is like in the rain forest or draw a climate graph for it. <p>Main activity</p> <ul style="list-style-type: none"> • Start by showing some clips of the tropical rain forest. There are plenty on YouTube or Class Clips.

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	<p>To understand why tropical rain forests have a high level of biodiversity and how vegetation and animals have adapted to the tropical rain forest environment.</p>	<p>adapted to the environment.</p> <p>Key words: Biodiversity Stratified layers Buttress roots Drip tips Camouflage adaptation</p>			<ul style="list-style-type: none"> Annotate diagram of the structure of the vegetation in the tropical rain forest. Create a table with two columns: Adaptation and Reason and fill in with as many adaptations as you know. Various images of the structure of the tropical rainforest can be found by searching on the internet. Students to research the biodiversity of the tropical rain forest using the internet or from books. Students to print some images or draw some images of one animal and one plant. Describe their characteristics and explain how and why they have adapted. <p>Plenary</p> <ul style="list-style-type: none"> What am I? – students to play the yes/no game in pairs to find identify a plant or animal from the tropical rain forest. Or - Mind movie. You are in a tropical rainforest all alone. What can you see, hear and smell?
<p>3 lessons (3 hours)</p>	<p>Key idea 3.5: Tropical rainforest ecosystems provide a range of goods and services some of which are under threat.</p> <p>Suggested learning objectives: To know the value of the tropical rain forest globally</p>	<p>3.5a: Examples of goods and services provided by tropical rainforest ecosystems (food stuffs, medicines, timber and recreation).</p> <p>3.5b: How climate change presents a threat to the structure, functioning and biodiversity of tropical rainforests.</p> <p>3.5c: Economic and social causes of</p>	<p>Amazon Tropical Rain Forest</p>	<p>Population projection line graphs.</p>	<p>Starter</p> <ul style="list-style-type: none"> What can we use the TRF for? Think about the goods and services and produce a mind map. Think about: <ul style="list-style-type: none"> land for agriculture, houses, roads jobs for locals in logging, agriculture and mining timber, charcoal to sell recreation medicines and food stuffs impact on global climate, changing carbon dioxide levels. <p>Consider the impact of climate change in the rain forest. These websites are good starting point. http://www.panda.org/ (World Wildlife Fund Global), www.amazonwatch.org and the Met Office website.</p>

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	<p>and locally. To understand how the tropical rain forest can provide valuable goods and services.</p> <p>To know the threats to the tropical rain forest and causes of these threats.</p> <p>To understand how and why the tropical rain forest needs to be managed in a sustainable way.</p>	<p>deforestation (conversion to agriculture, resource extraction, population pressure).</p> <p>3.5d: Political and economic factors (governance, commodity value and ecotourism) that have contributed to the sustainable management of a rainforest in a named region.</p> <p>Key words: Deforestation Structure and functioning Goods and services Sustainable management</p>			<p>http://www.metoffice.gov.uk/research/news/amazon-dieback</p> <ul style="list-style-type: none"> Discuss the impacts of drought, wildfires, etc. on biodiversity. <p>Amazon Rainforest case study Start with a documentary on the causes and consequences of deforestation. A useful documentary can be found on YouTube called Battle for the Amazon (BBC) although others are available.</p> <p>Main causes of deforestation include: Logging, agriculture-shifted cultivators, cash crops and cattle ranching, fuelwood, large dams, mining and industry and underlying causes, e.g. colonialism, exploitation by industrialised countries, the debt burden, the role of poverty etc.</p> <ul style="list-style-type: none"> Mining: various websites like these have articles on deforestation, use these or search for similar ones. Some of these links are from Greenpeace. http://www.mining-technology.com/projects/carajas/ Farming: http://www.greenpeace.org.uk/blog/forests/how-cattle-ranching-chewing-amazon-rainforest-20090129 http://rainforests.mongabay.com/0812.htm Ecotourism: http://www.amazonconservation.org/ourwork/livelihoods_ecotourism.html <p>Main activities</p> <ul style="list-style-type: none"> This part of the specification (Key idea 3.5) lends itself well to project work. Poster or presentation work on the cause, impacts and consequences of deforestation.

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
					<ul style="list-style-type: none"> Research an example of ecotourism. Describe the trip and with the aid of photos assess whether it is genuinely ecotourism. The success criteria for the group/project work could be based on: <ol style="list-style-type: none"> Detail and knowledge Understanding of the concepts Quality of the presentation. <p>Plenary</p> <ul style="list-style-type: none"> Group presentations and feedback.
1 lesson (1 hour)	<p>Key idea 3.6: Deciduous woodlands show a range of distinguishing features.</p> <p>Suggested learning objectives: To know the characteristics of the temperate deciduous forest and how nutrients are cycled within the ecosystem.</p> <p>To understand how energy can be passed on through the ecosystem.</p>	<p>3.6a: Abiotic and biotic characteristics of the deciduous woodland ecosystem (climate, soil, water, plants, animals and humans).</p> <p>3.6b: The interdependence of biotic and abiotic characteristics (climate, soil, water, plants, animals and humans) and the nutrient cycle (Gersmehl model).</p> <p>Key words: Nutrient cycling Energy flows</p>	Epping Forest UK	Use and interpretation of nutrient cycle diagrams and food web diagrams.	<p>Starter:</p> <ul style="list-style-type: none"> Start with a video clip of deciduous trees or forests. Show images of local forests. Describe the vegetation. How is the forest used commercially? How do local people use it for recreation? What are the attractions? What problems or conflicts might arise between people visiting the forest? <p>Main activities</p> <ul style="list-style-type: none"> Locate on a map of the UK the main areas of deciduous woodland. What do you notice? (very patchy, small areas, less than 5% of the UK) What has happened to most of the woodland? Why is much of the land used for coniferous/soft wood forests rather than deciduous woodland? (More profitable coniferous trees grow quicker. It can take over 100 years for an oak tree to grow, etc.). Make a list of all the biotic and abiotic factors for the deciduous forest. Explain how these interact to enable the deciduous forest to function properly. Issue students with a blank Gersmehl model for a deciduous forest. Make sure the circles for biomass, soil and litter are the appropriate size for the storage of nutrients.

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
					<ul style="list-style-type: none"> Teacher to guide students through the model to show nutrients and energy are circulated within the ecosystem. How nutrients are added or lost. Discuss with students about how this could be disrupted. <p>Plenary</p> <ul style="list-style-type: none"> What's the question? Give students the answer to a question from the lesson. Students need to think of what the question is.
1 lesson (1 hour)	<p>Key idea 3.6: Deciduous woodlands show a range of distinguishing features.</p> <p>Suggested learning objectives: To understand why deciduous forests only have moderate biodiversity compared to tropical rain forests.</p> <p>To learn how the biodiversity has adapted to the environment.</p>	<p>3.6c: Why deciduous woodlands have moderate biodiversity and how plants (leaf size and structure, water conservation in winter) and animals (migration, hibernation and food storage) are adapted to that environment.</p> <p>Key words: Biodiversity Adaptation Hibernation</p>	Epping Forest UK		<p>Starter</p> <ul style="list-style-type: none"> Compare climate graphs for the UK and the tropical rain forests. Discuss how the climate influences the vegetation in a temperate deciduous forest. <p>Main activity</p> <ul style="list-style-type: none"> Annotate a diagram that shows the vegetation structure of the temperate forest. Students to research the biodiversity of the temperate deciduous forest. Students to print some images or draw some images of one animal and one plant. Describe their characteristics and explain how they are linked to the climate and soils and how they have adapted to the environment. <p>Plenary</p> <ul style="list-style-type: none"> What am I? – In pairs students ask questions to guess a particular animal or plant species that can be found in temperate deciduous forests.
3 lessons (3 hours)	<p>Key idea 3.7 Deciduous woodlands ecosystems</p>	<p>3.7a: Examples of goods and services provided by deciduous woodlands ecosystems</p>	Epping Forest UK	Use of GIS to identify pattern of forest loss.	<p>Starter</p> <ul style="list-style-type: none"> Ask students if they have visited a deciduous woodland for recreation. What did they do?

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
	<p>provide a range of goods and services some of which are under threat.</p> <p>Suggested learning objectives: To understand how temperate deciduous forest can provide goods and services for people.</p> <p>To learn how climate change can threaten the structure and functioning of deciduous forests.</p> <p>An opportunity to integrate the use of GIS in mapping and identifying patterns of forest loss over time.</p>	<p>(timber, fuel, conservation and recreation).</p> <p>3.7b: How climate change presents a threat to both the structure, function and biodiversity of the deciduous woodland ecosystem.</p> <p>3.7c: Economic and social causes of deforestation (urbanisation and population growth, timber extraction and agricultural change).</p> <p>3.7d: Different approaches to the sustainable use and management of deciduous woodlands in a named region.</p> <p>Key words: Goods and services Climate change Structure and Functioning Deforestation Urbanisation Sustainable management</p>			<p>Main activities</p> <ul style="list-style-type: none"> Students are asked to state the main uses of temperate deciduous woodlands.eg. <ul style="list-style-type: none"> Landscape: woods have tremendous scenic value - many areas are protected by preservation orders. Timber production Habitat for birds and animals: particular woods may harbour certain species and have SSSI and similar status. Game management e.g. Sandringham estate, livestock grazing, Leisure pursuits e.g., Epping Forest - walking, mountain biking, birdwatching, off-road vehicles (a modern trend), paintballing, shelter belts. etc. Students produce a spider diagram with uses such as timber, leisure, shelter, noise breaks, etc. Climate change issues can be discussed using this link from the Forestry Commission website: http://www.forestry.gov.uk/fr/climatechangeenqland <p>Epping Forest case study Useful resources: http://www.cityoflondon.gov.uk/things-to-do/green-spaces/epping-forest/Pages/default.aspx http://www.visiteppingforest.org/ http://www.visitessex.com/epping.aspx</p> <ul style="list-style-type: none"> This part of the specification (Key idea 3.7) lends itself well to project work. Map the location of Epping Forest. Research early uses and management. Recreational activities. Poster and presentation work. Is Epping Forest managed in a sustainable way?

Lessons	Learning objectives	Content (vocabulary, concepts, processes, ideas)	Place exemplification	Integrated skills	Teaching activities and resources
					<ul style="list-style-type: none"> Leaflet for visitors explaining how it is managed. SSSI, Conservation, Grazing, Pollarding etc. The success criteria for the group/project work could be based on: <ol style="list-style-type: none"> Detail and knowledge Understanding of the concepts Quality of the presentation. <p>Plenary</p> <ul style="list-style-type: none"> Group presentations Fact sheets Feed back

Independent learning/homework

Task 1	<i>Presentation</i>	This topic lends itself well to group work, project work and PowerPoint presentations, particularly when researching tropical rain forests and temperate deciduous forests.
Task 2	<i>Fact sheet</i>	Produce a fact sheet of the Amazon Rain Forest. Include why it is important? Why it is under threat and how it can be managed in a sustainable way.
Task 3	<i>Revision</i>	Compare and contrast the biodiversity of the tropical rain forests and temperate deciduous forests.
Task 4	<i>Fieldwork</i>	If your school is close to a deciduous woodland, then have a visit. Take photos of the biodiversity and produce a fact sheet.
Task 5	<i>Map skills</i>	Use an OS map showing an area of deciduous woodland. Plan some activities around the resource such as land use activities, 6-figure grid references, what can be done in the area, what evidence is there that this area is managed etc.
Task 6	<i>Revision</i>	Produce a revision glossary. Define all the key terms in this topic.
Task 7	<i>Top 5</i>	Tropical rain forests and temperate deciduous forests top 5 - students review their learning of the two ecosystems by identifying five aspects they are confident about and five aspects they need to revise further.
Task 8	<i>Story boards</i>	Students to produce a story board with a fact sheet on the causes and consequences of deforestation of tropical rain forest or deciduous woodland.



Task 9	<i>Peer quiz</i>	Students to create a ten-question quiz for tropical rain forests and temperate deciduous forests. Ask questions on biodiversity, good and services, threats and management.
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End-of-topic assessment

Appropriate exam questions for an end-of-topic assessment can be found in the SAMs on pages 20-25.