



### Subject: Geography Year 10

#### Overarching Topic: Ecosystems, Biodiversity & Management

Students will look at the global pattern of ecosystems and biomes and the factors affecting the locations and characteristics. The relevance of the biosphere to people is examined, specifically the marine and terrestrial ecosystems of the UK. Biomes studies in detail are the Tropical Rainforests, with a focus on Madagascar; and Deciduous Woodlands, with a focus on the UK. For both of these biomes their distinguishing biotic and abiotic characteristics, their locations and their nutrient cycles are learnt. Students study the goods and services provided by each biome, the threats to each biome and how these threats are managed at various scales. Additionally, the ways in which climate change is impacting Tropical Rainforests and Deciduous Woodlands is discussed. The unit interlinks with aspects of Changing Landscapes of the UK, Weather Hazards and Climate Change, Changing Cities, Global Development and Resource Management.

	Essential	Core	Ambitious
<b>The Big Questions</b> (What questions will students be able to answer upon mastery of the topic?)	<ul style="list-style-type: none"> <li>What are biomes and ecosystems?</li> <li>Where are different biomes located, and why?</li> <li>How do we use different ecosystems?</li> <li>What are the threats to ecosystems, and how can we manage them?</li> </ul>	<ul style="list-style-type: none"> <li>What factors affect the distribution of biomes and ecosystems?</li> <li>What goods and services are provided by rainforests and deciduous woodlands?</li> <li>What are the physical and human threats to rainforests and deciduous woodlands – how do they compare?</li> <li>What kind of threat does climate change pose?</li> <li>How are these threats managed in HICs and LICs?</li> </ul>	Is the distribution of biomes altering because of climate change? How is exploitation of ecosystems changing and being managed in different places? Human impacts on nutrient cycles? What are the effects of biome degradation on people and communities? What's the conflict between economic development and sustainable ecosystem management?
<b>The Key Skills/ Techniques</b>	<b>The sophistication and application of skills will become more advanced as students' progress through the essential, core and ambitious knowledge</b>		
	<b>Skill/Technique</b> Mapping Interpreting GIS maps & data Nutrient cycle diagrams Graphical skills	<b>How will this skill be developed?</b> Mapping and comparing locations of global biomes and specific ecosystems Observing patterns of deforestation, climate change impacts, urban encroachment Interpreting and comparing nutrient cycles for different ecosystems, predicting change in food webs Interpreting population projections, resource availability, biomass depletion, climate graphs	