

# Access to H.E. National Programme Unit



Unit Title:	Ecosystems		
Graded Unit Code:	GA33BIO10	Ungraded Unit Code:	UA33BIO10
Pathway(s):	Science and Engineering		
Module(s):	Biology		
Level:	3	Credit Value:	3
Valid from:	31 <sup>st</sup> July 2021	Valid to:	31 <sup>st</sup> July 2026

**The following QAA grade descriptors must be applied if you are delivering the graded version of this unit:**

1	Understanding of the subject
2	Application of knowledge
4	Use of information
5	Communication and presentation
7	Quality

LEARNING OUTCOMES	ASSESSMENT CRITERIA
<b>The learner will:</b>	<b>The learner can:</b>
1. Understand basic ecological principles and terminology	1.1 Use examples to illustrate the meaning of the terms: population, community, environment, ecosystem, biome, habitat, ecological niche and biodiversity
	1.2 Use information to construct food chains and food webs and to identify trophic levels (producer, primary and secondary consumer, and decomposers)
	1.3 Draw pyramids of numbers, energy and biomass and evaluate them in terms of the laws of thermodynamics and conservation of mass

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2. Recognise the importance of recycling in ecosystems and the effects of human activity	2.1 Interpret diagrams illustrating the water cycle, the carbon cycle and the nitrogen cycle and explain the roles of microorganisms in cycling nutrients
	2.2 Research and summarise one effect of human activity on each of the water cycle, the carbon cycle and the nitrogen cycle
3. Understand the factors affecting ecological succession and the effects of human activity on climax communities	3.1 Describe ecological succession for a named bare substrate (e.g. bare rock, sand [dune], lifeless pond)
	3.2 Explain the concept of the climax community and why such communities are generally stable
	3.3 Research one example of the effects of human activity on a climax community (e.g. slash and burn farming, pastoralism, monoculture, urbanisation, mining)