

**Unit 3: Landscape Ecology**

		Skill	Objectives	Cognitive Domain and Learning Cycle Stage
<b>Module 9</b>	<b>Types of Ecosystems</b>			
Learning Objective 1.4.1	List the characteristics of terrestrial, aquatic, and wetland ecosystems	1.4.1A	Describe the characteristics of a terrestrial ecosystem	Remembering, concrete experience
		1.4.1B	Describe the characteristics of aquatic ecosystems, including the difference between marine and freshwater	Remembering, concrete experience
		1.4.1C	Define a wetland	Remembering, concrete experience
		1.4.1D	Define brackish water	Remembering, concrete experience
		1.4.1E	Define marsh, fen, bog, mangrove	Remembering, concrete experience
<b>Module 10</b>	<b>World Biomes</b>			
Learning Objective 1.4.2	Describe how geography drives the locations of the Earth's biomes	1.4.2A	Describe the characteristics and typical location of tropical forests	Remembering, concrete experience
		1.4.2B	Describe the characteristics and typical location of deciduous forests	Remembering, concrete experience
		1.4.2C	Describe the characteristics and typical location of savannas	Remembering, concrete experience
		1.4.2D	Describe the characteristics and typical location of temperate grasslands	Remembering, concrete experience
		1.4.2E	Describe the characteristics and typical location of deserts	Remembering, concrete experience
		1.4.2F	Describe the characteristics and typical location of coniferous forests	Remembering, concrete experience
		1.4.2G	Describe the characteristics and typical location of chaparral	Remembering, concrete experience
		1.4.2H	Describe the characteristics and typical location of tundra	Remembering, concrete experience
		1.4.2I	Describe the characteristics arctic and high mountain ice	Remembering, concrete experience
		1.4.2J	Describe the characteristics of oceans	Remembering, concrete experience
		1.4.2K	Define ecotone	Remembering, concrete experience
		1.4.2L	Discuss how changes in ecotone dynamics may be indicative in changes in the health of an ecosystem	Understanding, reflective observation
<b>Module 11</b>	<b>Biogeography</b>			
Learning Objective 1.4.3	Analyze the effects of microclimates on organisms living in various biomes	1.4.3A	Define microclimate	Remembering, concrete experience
		1.4.3B	Analyze the effects changing microclimate may have on terrestrial organisms	Analyze, active experimentation
		1.4.3C	Discuss island biogeography	Understanding, reflective observation
		1.4.3D	Discuss the role of changing microclimate on extinction	Understanding, reflective observation
<b>Module 12</b>	<b>Ecosystem Services</b>			

Learning Objective 1.4.4	<i>Discuss the concept of ecosystem services and how ecosystems may provide certain benefits to humans</i>	1.4.4A	Define the term <i>ecosystem services</i>	Remembering, concrete experience
		1.4.4B	Define regulating services, cultural services, provisioning services, and supportive services	Remembering, concrete experience
		1.4.4C	Discuss how wetlands provide ecosystem services	Understanding, reflective observation
		1.4.4D	Analyze the role of bees in agriculture	Analyze, active experimentation
		1.4.4E	Analyze the concept of payments for ecosystem services	Analyze, active experimentation
Learning Objective 1.4.5	<i>Evaluate how environmental change may affect ecosystems</i>	1.4.5A	Define disturbance	Remembering, concrete experience
		1.4.5B	Discuss the role of fire in nature	Remembering, concrete experience
		1.4.5C	Define invasive species	Remembering, concrete experience
		1.4.5D	Discuss the wildland-urban interface	Understanding, reflective observation
		1.4.5E	Define ecological succession	Remembering, concrete experience
		1.4.5F	Analyze human land use patterns and the effects on terrestrial ecosystems	Analyze, active experimentation
Learning Objective 1.4.6	<i>Analyze the role of forests in the global carbon cycle</i>	1.4.6A	Evaluate where forests are located globally	Evaluating, abstract conceptualization
		1.4.6B	Define source and sink	Remembering, concrete experience
		1.4.6C	Define net primary productivity and global net primary productivity	Remembering, concrete experience
		1.4.6D	Discuss the causes of global deforestation	Understanding, reflective observation
		1.4.6E	Analyze the effects of deforestation on the global carbon cycle	Analyze, active experimentation