



Alignment Document
State of Mississippi and Aventa Learning Environmental Science

Environmental Science
2005-2007 Benchmark Blueprint

Standards	Benchmarks	Unit Name	Course Topic Description
ENV.1 Utilize critical thinking and scientific problem solving in designing and performing biological research and experimentation.	ENV.1.a Demonstrate the proper use and care for scientific equipment used in environmental science.		
	ENV.1.b Observe and practice safe procedures in the classroom and laboratory.		
	ENV.1.c Apply the components of scientific processes and methods in the classroom and laboratory investigations		
	ENV.1.d Communicate results of scientific investigations in oral, written, and graphic form.		
ENV.2 Explain the flow of matter and energy in ecosystems.	ENV.2.a Investigate the role of biotic and abiotic factors within habitats, ecosystems, and biomes.	Ecology	How Ecosystems Work
		Ecology	Biomes
	ENV.2.b Identify indigenous plants and animals and their roles in different ecosystems.		
	ENV.2.c Describe food chains and food webs within an ecosystem.	Ecology	How Ecosystems Work
	ENV.2.d Predict how the introduction, removal or reintroduction of an organism may alter the food chain, change populations, and impact the biodiversity of ecosystems.		
ENV.3 Describe the relationships and changes within an ecosystem.	ENV.3.a Explain how a species adapts to its niche.		
		Ecology	How Ecosystems Work

	ENV.3.b Relate population dynamics (natural selection, exponential growth, predator/prey) to carrying capacity and limiting factors.	Populations	Understanding Populations
	ENV.3.c Evaluate the effects of biotic and abiotic factors on local ecosystems and biomes.		
	ENV.3.d Describe the process of primary and secondary succession.	Ecology	How Ecosystems Work
	ENV.3.e Analyze and describe the effects of events such as fires, hurricanes, deforestation, mining, population growth and industry on environments.	Populations	Understanding Populations
ENV.4 Investigate the major biomes of the world's ecosystems.	ENV.4.a Describe the following biomes to include location, climate, adaptations and diversity.	Ecology	Biomes
	ENV.4.a.1 desert	Ecology	Biomes
	ENV.4.a.2 tundra	Ecology	Biomes
	ENV.4.a.3 grassland	Ecology	Biomes
	ENV.4.a.4 savannah	Ecology	Biomes
	ENV.4.a.5 coniferous forest	Ecology	Biomes
	ENV.4.a.6 deciduous forest	Ecology	Biomes
	ENV.4.a.7 rain forest	Ecology	Biomes
	ENV.4.a.8 aquatic environments		
ENV.4.b Illustrate where the eight major biomes occur.			
ENV.5 Summarize the interrelationships among the resources and human activities in the local environment.	ENV.5.a Identify sources, use, quality and conservation of water.	Water, Air and Land	Water
	ENV.5.b Identify renewable and non-renewable resources.	Mineral and Energy Resources	Renewable Energy
		Mineral and Energy Resources	Nonrenewable Energy
	ENV.5.c Evaluate the impact of human activity and technology on the lithosphere, hydrosphere, and atmosphere.	Water, Air and Land	Water
Water, Air and Land		Air	

	ENV.5.d Identify the effects of pollution (water, noise, air, etc.) on the ecosystem.		
	ENV.5.e Describe how communities have restored ecosystems.		
ENV.6 Research various environmental topics, such as major events, careers, history, and significant contributions.			