Oklahoma Science

Environmental Science

Ecosystems: Interactions, Energy, and Dynamics LS2	**1** Use mathematical and/or computational representations to support explanations of factors that affect carrying capacities of ecosystems at different scales. EN.LS2.1
	2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. EN.LS2.2
	4 Use a mathematical representation to support claims for the cycling of matter and the flow of energy among organisms in an ecosystem. EN.LS2.4
	6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. EN.LS2.6
	7 Design, evaluate, and refine a solution for reducing the impact of human activities on the environment and biodiversity.* EN.LS2.7
Biological Unity and Diversity LS4	**6** Use evidence to construct an explanation that describes how a designed solution mitigates adverse impacts of human activity on biodiversity.* EN.LS2.6
Earth Systems ESS2	**1** Develop a model to illustrate how Earth's internal and surface processes operate at different scales of space and time to form continental and ocean-floor features. EN.ESS2.1
	2 Analyze geoscience data to make the claim that one change to Earth's surface can create feedback and interactions that cause changes to other Earth systems. EN.ESS2.2
	3 Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection. EN.ESS2.3
	4 Analyze and interpret data to explore how variations in the flow of energy into and out of Earth's systems cause changes to the atmosphere and climate. EN.ESS2.4
	5 Plan and conduct investigations of how the structure and resulting properties of water interact with the Earth's materials and surface processes. EN.ESS2.5

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	6 **Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.** EN.ESS2.6
	7 **Engage in argument from evidence for how the simultaneous co-evolution of Earth's systems and life on Earth led to periods of stability and change over geologic time.** EN.ESS2.7
Earth and Human Activities ESS3	1 **Construct an explanation based on evidence for how the availability of natural resources, occurrences of natural hazards, and changes in climate affect human activity.*** EN.ESS3.1
	2 **Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios on large and small scales.*** EN.ESS3.2
	3 **Use computational simulations to illustrate changes in the relationships between natural resources, human populations, and biodiversity and their sustainability within Earth's systems.*** EN.ESS3.3
	4 **Evaluate design solutions for a major global or local environmental problem that reduces or stabilizes the impacts of human activities on natural systems.*** EN.ESS3.4