

# Ecosystems: Interactions, Energy, and Dynamics: Grades 9-12

Adopted 2013

## Ecosystems: Interactions, Energy, and Dynamics [HS-LS2](#)

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- HS-LS2-1.** Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. [HS-LS2-1](#)
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- HS-LS2-2.** Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. [HS-LS2-2](#)
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- HS-LS2-3.** Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. [HS-LS2-3](#)
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- HS-LS2-4.** Use a mathematical representation to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. [HS-LS2-4](#)
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- HS-LS2-5.** Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere. [HS-LS2-5](#)
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- HS-LS2-6.** 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. [HS-LS2-6](#)
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- HS-LS2-7.** Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. [HS-LS2-7](#)
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- HS-LS2-8.** Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. [HS-LS2-8](#)