

Wright City Science Curriculum

6th Grade

Grade	6
Unit of Study	Ecosystems: Interactions, Energy, and Dynamics
Length of Unit	6 weeks
Sample Essential Questions	Sample Corresponding Big Ideas
What resources do organisms need to survive, and why are they limited?	Organisms need specific resources to survive.
How does the availability of resources affect the survival, health, and growth of organisms and populations?	Resource availability affects the health of both individuals and populations.
How does the availability of resources cause populations to increase, decrease, or remain stable?	Populations change based on resource availability.
How do biotic and abiotic factors interact to shape an ecosystem?	Biotic and abiotic factors work together in all ecosystems.
How can change in one part of an ecosystem cause changes in other parts?	Changes to one factor in an ecosystem can affect the entire ecosystem.
How does matter cycle through the living and nonliving parts of an ecosystem?	Matter cycles continuously through ecosystems.
How does energy from the sun move through producers, consumers, and decomposers in food chains and webs?	Energy flows through food chains and food webs.

Missouri Learning Standards

Priority Standards

6-8.LS2.A.1 Analyze and interpret data to provide evidence for the effects of resource availability on individual organisms and populations of organisms in an ecosystem.

6-8.LS2.A.2 Construct an explanation that predicts the patterns of interactions among and between biotic and abiotic factors in a given ecosystem.

6-8.LS2.B.1 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Unit 1 Sequence			
MLS	Topic(s)	Learning Targets	Academic Vocabulary
6-8.LS2.A.1	Resource Availability	I can identify the resources that organisms need to survive, such as food, water, space, and shelter and explain how these resources are limited.	organism population ecosystem resources competition carrying capacity limiting factors predator prey herbivore carnivore omnivore producer consumer
		I can explain how resource availability affects the health of both individuals and populations in an ecosystem.	
		I can collect and interpret data showing how changes in resources affect organisms and populations.	
		I can identify patterns in data that show the relationship between resource availability and population changes.	
		I can explain why populations increase, decrease, or remain stable based on resource availability and use data to support my claim.	
6-8.LS2.A.2	Interactions Among Biotic and Abiotic Factors	I can identify biotic factors (living things) and abiotic factors (non-living things) in an ecosystem.	biotic factor abiotic factor living non-living organism ecosystem
		I can explain how biotic and abiotic factors interact and depend on each other.	

		I can explain how the presence or absence of certain factors affects other organisms or elements in the ecosystem.	interdependence relationship predator prey herbivore carnivore omnivore producer consumer
		I can use observations and data to predict how changes in one factor (biotic or abiotic) will affect other parts of the ecosystem.	
		I can organize evidence from data, observations, or models to explain interactions in an ecosystem.	
6-8.LS2.B.1	Cycling of Matter in an Ecosystem	I can explain how matter cycles through ecosystems and how energy flows from the sun through producers, consumers, and decomposers.	producer consumer decomposer herbivore carnivore omnivore photosynthesis food chain food web trophic level ecosystem
		I can describe how decomposers return matter to the soil, air, or water to be reused by other organisms.	
		I can explain how energy from the sun is captured by producers and transferred to consumers and decomposers.	
		I can describe how energy is eventually lost as heat during these transfers.	
		I can create a diagram, drawing, or digital model that shows how matter cycles and energy flows in an ecosystem.	
		I can label and explain the parts of my model, including producers, consumers, decomposers, and abiotic components.	

MLS	Learning Activities	
6-8.LS2.A.2	Biotic and Abiotic Notes	Must Do ▾
6-8.LS2.A.2	Biotic and Abiotic Factors 360 Video	Can Do ▾
6-8.LS2.B.1	Roles in Ecosystems Notes	Must Do ▾
6-8.LS2.B.1	Food Chain Challenge	Can Do ▾
6-8.LS2.B.1	Create A Food Web	Can Do ▾
6-8.LS2.B.1	Food Chain Webs Booklet Jigsaw	Can Do ▾
6-8.LS2.B.1	Ecosystems Hyperdoc	Can Do ▾
6-8.LS2.A.1	Balanced Ecosystem Simulation	Can Do ▾
6-8.LS2.A.1	Ecosystem Changes Task Card	Can Do ▾

