

UNIT 3

Grade	10
Unit of Study	Ecology & Inheritance
Length of Unit	3 weeks
Sample Essential Questions	Sample Corresponding Big Ideas
How do organisms' actions in an environment affect each other?	Ecosystem stability requires interdependent interactions between organisms that perform specific roles.
How can examining alleles be used to determine inheritance?	Alleles can be used to determine parentage of individuals. A karyotype can be examined to determine mutations in & sex of an individual.
How can examining chromosomes determine the presence of mutations and the sex of individuals?	Energy transfer occurs in multiple steps with 10% transfer as you move up trophic levels.
How is energy transferred within an ecosystem?	

Missouri Learning Standards	
<u>Biology Power Standards</u>	Supporting Standards
Power Standard 1: I can observe and compare cell structures and the processes essential for the survival of the cell/organism.	LS2.B.2
Power Standard 2: I can understand that there is a genetic basis for the transfer of biological characteristics from one generation to the next through reproductive processes.	LS3.A.1
Power Standard 4: Ecosystem Dynamics: I can investigate ecosystems and interactions of organisms with each other and their environments and compare and contrast the diversity among different organisms.	LS2.C.1 / LS4.C.2

Unit 3 Sequence			
MLS	Topic(s)	Learning Targets	Academic Vocabulary
LS2.C.1 / LS4.C.2	Ecosystem Dynamics	I can gather, analyze and evaluate evidence of complex physical or biological changes that affect ecosystem conditions and stability.	Keystone Species Predation Symbiosis Competition Niche Partitioning Mutualism Commensalism Parasitism
LS2.B.2	Energy Flow	I can analyze data using tools, technologies, and/or models in order to make valid and reliable scientific claims about how matter and the flow of energy move among the trophic levels in a given ecosystem.	Food Chain Food Web Energy Pyramid Primary Consumer Secondary Consumer Tertiary Consumer Apex Predator Detritivores Decomposers Scavengers
LS3.A.1	Inheritance	I can explain how alleles on chromosomes are passed from parent to offspring.	Gene Allele Chromosome Genotype Phenotype Karyotype Sex Chromosomes Monosomy Trisomy

MLS	Learning Activities	
LS2.C.1 / LS4.C.2	Battle at Kruger CER Practice	Must Do ▾
LS3.A.1	Reuniting the African Wild Dogs	Must Do ▾
LS3.A.1	Karyotype Safari	Must Do ▾
LS2.B.2	Haunted Food Web	Must Do ▾
LS2.C.1 / LS4.C.2	Trials of Life Video Symbiosis Practice	Must Do ▾
LS2.C.1 / LS4.C.2	Elephants Role in the Ecosystem	Must Do ▾

Assessments		
MLS	Description or Location	Rubric/Location
LS2.C.1 / LS4.C.2 LS3.A.1 LS2.B.2	Unit 3 Test	Pear Assessment
LS2.C.1 / LS4.C.2	Keystone Species Claim Evidence Reasoning	Paper

Additional Resources
Quizizz.com , Blooket.com , Quizlet.com , Openstax.org