

UNIT 4

Grade	10
Unit of Study	Energy Processes: Photosynthesis & Cellular Respiration
Length of Unit	3-4 weeks
Sample Essential Questions	Sample Corresponding Big Ideas
How do the processes of photosynthesis & cellular respiration contribute to providing energy to organisms.	Stored & chemical energy production vs. usable energy processes and how they vary in organisms

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.	LS1.C.1, LS1.C.2, LS2.B.1

Unit 4 Sequence			
MLS	Topic(s)	Learning Targets	Academic Vocabulary
LS1.C.1	Photosynthesis	I can use a model to illustrate the transfer of matter and flow of energy between the organism and its environment during photosynthesis.	Photosynthesis Reactant Product Anabolic Reaction Stored/Chemical Energy Glucose Chloroplast Chlorophyll Stomata
LS1.C.2	Cellular Respiration	I can use a model to show that cellular respiration is a chemical process where the bonds of molecules are broken and new compounds are formed resulting in a release of energy	Cellular Respiration Catabolic Reaction Adenosine Triphosphate (ATP) Mitochondria

LS2.B.1	Chemosynthesis	I can explain that the processes of photosynthesis, chemosynthesis, and aerobic and anaerobic respiration are responsible for the flow of energy through ecosystems and that environmental conditions restrict which reactions can occur	Chemosynthesis Extremophile

MLS	Learning Activities	
LS1.C.1	Leaf Model & Photosynthesis Refresher Worksheet	Must Do ▾
LS1.C.1	Photosynthesis Turkey Trot (Scavenger Hunt)	Must Do ▾
LS1.C.1	Photosynthesis Review Coloring	Must Do ▾
LS1.C.2	Bean Lab	Must Do ▾

Assessments		
MLS	Description or Location	Rubric/Location
LS1.C.1 LS1.C.2 LS2.B.1	Unit 4 Quest	Pear Assessment
LS2.B.1	Carnivorous Plants CER	Paper

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