

UNIT 5

Grade	10
Unit of Study	Feedback Loops & Aerobic vs Anaerobic Respiration
Length of Unit	3-4 weeks
Sample Essential Questions	Sample Corresponding Big Ideas
How do body systems interact to maintain homeostasis?	Body systems cooperate to maintain homeostasis.
How do the 2 types of feedback loops work to solve a problem or maintain homeostasis?	Negative feedback loops work against a stimulus to maintain homeostasis.
How are aerobic and anaerobic methods used to maintain energy levels in different types of cells and organisms?	Positive feedback loops amplify a response until a problem is solved.
	Anaerobic respiration is used by microorganisms to produce energy.
	Anaerobic respiration is used by muscle cells to produce energy in instances of low oxygen.

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.A.3, LS1.A.2, & LS2.B.1

Unit 5 Sequence			
MLS	Topic(s)	Learning Targets	Academic Vocabulary
LS1.A.3	Homeostasis	I can provide evidence that feedback mechanisms maintain homeostasis	Feedback Loop Stimulus Effector

LS1.A.2	Body Systems	I can show how body systems work together to complete specific functions in organisms	Endocrine System Integumentary System Lymphatic System Tissue Organ Organ System
LS2.B.1	Aerobic & Anaerobic Cellular Respiration	I can explain how the presence or absence of oxygen affects the efficiency and products of cellular respiration.	Aerobic Anaerobic Fermentation Lactic Acid

MLS	Learning Activities	
LS1.A.3 LS1.A.2 LS2.B.1	Marathon Runner Case Study	Must Do ▾
LS1.A.2	Body Systems Dating Profile	Must Do ▾
LS1.B.1	Muscle Fatigue Lab	Must Do ▾
LS1.B.1	Yeast Lab	Must Do ▾
LS1.A.3	Feedback Loop Stations	Must Do ▾

Assessments		
MLS	Description or Location	Rubric/Location
LS1.A.2 LS1.A.3 LS1.B.1	Unit 5 Quiz	Pear Assessment
LS1.A.3 LS1.A.2 LS2.B.1	Marathon Runner CER	Paper

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