



Marietta City Schools

District Unit Planner

Everything on the unit planner must be included on the unit curriculum approval statement.

Science Grade 7 Advanced Studies

Unit title	<i>Cells, Cell Processes, and Human Body (Unit 2)</i>	MYP year	2	Unit duration (hrs)	45 Hours
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Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

Learning Experiences

Add additional rows below as needed.

Objective or Content	Learning Experiences	Personalized Learning and Differentiation
S7L2. Obtain, evaluate, and communicate information to describe how cell structures, cells, tissues, organs, and organ systems interact to maintain the basic needs of organisms. a. Develop a model and construct an explanation of how cell structures (specifically the nucleus, cytoplasm, cell membrane, cell wall, chloroplasts, lysosome, and mitochondria) contribute to the function of the cell as a system in obtaining nutrients in order to grow, reproduce, make needed materials, and process waste.	CER: How do TikTok challenges impact the human body at the cellular and system levels? Mosa Mack Cells Lesson #1: Phenomenon + Introduction to Microscopes Mosa Mack Cells Lesson #2: The Lab Cell Analogies Observing the Impacts of Resource Availability on Yeast Respiration (Science: B,C) Lab: Diffusion/Osmosis	<ul style="list-style-type: none"> Capstone Connections Discovery Education High School Biology Science Techbook NGSS Case Study 7: Gifted and Talented Students Next Generation Science Standards: "All Standards, All Students" Extensions – Enrichment Tasks/Projects Task-Specific Differentiation <ul style="list-style-type: none"> CER peer review and feedback

<p>S7L2. Obtain, evaluate, and communicate information to describe how cell structures, cells, tissues, organs, and organ systems interact to maintain the basic needs of organisms.</p> <p>b. Develop and use a conceptual model of how cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms.</p>	<p>CER: How do TikTok challenges impact the human body at the cellular and system levels?</p> <p>Frog Dissection</p>	<ul style="list-style-type: none"> ● Use of Mosa Mack phenomenon for increased level of rigor ● Students develop their own diffusion/osmosis investigation to include procedures; students select variables to alter ● Open-ended sections embedded in lab report ● Increased vocabulary instruction in context ● Students select from Mosa Mack engineering design challenges
<p>S7L2. Obtain, evaluate, and communicate information to describe how cell structures, cells, tissues, organs, and organ systems interact to maintain the basic needs of organisms.</p> <p>c. Construct an argument that systems of the body (Cardiovascular, Excretory, Digestive, Respiratory, Muscular, Nervous, and Immune) interact with one another to carry out life processes. (Clarification statement: The emphasis is not on learning individual structures and functions associated with each system, but on how systems interact to support life processes.)</p>	<p>CER: How do TikTok challenges impact the human body at the cellular and system levels?</p> <p>Mosa Mack Interactions of the Human Body Lesson #1: Phenomenon</p> <p>Mosa Mack Engineering Design Challenge: Medical Consultant</p> <p>Mosa Mack Interactions of the Human Body Lesson #2: System Labs</p> <p>Frog Dissection</p>	
<p style="text-align: center;">Content Resources</p>		
<p>Mosa Mack: Cells</p> <p>Mosa Mack: Interactions of Body Systems</p> <p>Discovery Education Grade 7 Science Techbook</p> <p>Discovery Education High School Biology Science Techbook</p>		
<p style="text-align: center;">Capstone Connections</p> <p>Observing the Impacts of Resource Availability on Yeast Respiration (Science: B,C)</p> <p>Capstone Ideas Brainstorming</p> <p>Teacher Feedback on Initial Capstone Ideas</p> <p>Final Capstone Idea & Submission of Anticipated Materials</p>		

