

## K-5 Science Lesson Plan

<b>Teacher:</b> N. Phillips	<b>Date:</b> 09/07/2020 - 09/11/2020	<b>Grade:</b> 4
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<p><b>MSCCRS for Science:</b>  <b>L.4.1.3 Construct models of organ systems (e.g. circulatory, digestive, respiratory, muscular, skeletal, nervous) to demonstrate both the unique function of the system and how multiple organs and organ systems work together to accomplish more complex functions. Art standard(s) VA: Cr1.1.4 Generate and conceptualize artistic ideas and work. a. Brainstorm multiple approaches to a creative art or design problem. VA: Cr1.2.4 Generate and conceptualize artistic ideas and work. a. Collaboratively set goals and create artwork that is meaningful and has purpose to the makers. VA: Cr2.1.4 Organize and develop artistic ideas and work. Explore and invent art-making techniques and approaches.</b></p>	<p><b>Learning Target(s)/Goal(s):</b>  <b>TSW list, identify and describe the major organ systems of the human body (organs in the respiratory system, digestive system, skeletal system and circulatory system). Students will learn the parts and functions of the skeleton by learning the names of some major bones and creating a model of the skeleton. Students will be able to identify the various parts of the digestive system. Students will be able to identify the function of the various parts of the digestive system. Students will be able to understand how the skeletal system, respiratory, digestive systems work together.</b></p> <p><b>Generate and conceptualize artistic ideas and work.  Organize and develop artistic ideas and work.  Refine and complete artistic work.</b></p>
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<p><b>Concept(s):</b>  How do the different body systems work together? What is the purpose of a model? What role does Calcium play in our diet?</p> <p><b>Key Vocabulary:</b>  <b>Digestive system, skeletal system, respiratory system, esophagus, stomach,</b></p>
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<b>MONDAY</b>	<p><b>Engage:</b> An activity that will generate and stimulate interest and access prior to knowledge.</p> <p><b>Activity:</b>  <b>Monday is Labor Day. Beginning Tues, 09/08/2020, TSW will begin working on models of the human body systems this week. Before we do that, we have to identify what that body system is and list the organs in that body system, identify what the organs look</b></p>	<p style="text-align: center;"><b>Teacher Behaviors</b></p> <p><input type="checkbox"/> Motivates  <input checked="" type="checkbox"/> Creates interest  <input type="checkbox"/> Taps into what students know or think about the topic  <input checked="" type="checkbox"/> Raises questions and encourages responses</p>	<p style="text-align: center;"><b>Student Behaviors</b></p> <p><input checked="" type="checkbox"/> Attentive in listening  <input checked="" type="checkbox"/> Ask questions  <input checked="" type="checkbox"/> Demonstrates interest in the lesson  <input checked="" type="checkbox"/> Responds to questions demonstrating their own entry point of understanding</p>	<p style="text-align: center;"><b>Resources</b>  Diagram</p> <p>Check for Understanding  TTW ask TS how many bones are in the body? TTW input this information into the chat and TS will respond in the chat. TSW make a sentence in their notes - There are 206 bones in the body. TTW ask TS which bone is the largest/smallest in the body? TSW respond same as above - chat and writing. TSW write in their</p>
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	<p>like and describe those organs. TTW show TS pictures of the skeletal system. Since we discussed the respiratory system, it will also be included in our modeling. TSW have a choice to make 1 model. TSW will receive extra credit if TS decide to make more than 1 model. TTW have TS to model the skeletal or respiratory or digestive or circulatory system in these series of lessons. TTW probe TS to find out why one want to make a model of a body system? TSW begin making the models. TTW guide TS.</p>			<p>notes in a sentence - The longest and strongest bone in your skeleton is the femur, which is your thigh. The smallest bone is the stirrup bone inside your ear. TTW ask TS why do they think we have a skeleton - TSW will respond same as above - TSW write in their notes - The skeleton provide the structure to the body. TSW also inform TS that the skeleton also works with the muscles and in that way, help the body move. TTW also explain to TS that bones need calcium, a substance i milk and cheese that helps the bones stay healthy</p>
<b>TUESDAY</b>	<p><b>Explore:</b> Investigate and answer a question from the engagement activity. An activity is done which gives students a chance to think and investigate, problem solve, collect data, and test. <b>Activity:</b> (<b>Note: TTW shows TS all systems at once. For purposes of this lesson plan, TTW use the same set of guidelines for the circulatory, respiratory and digestive systems).</b> TT and TSW continue discussion of why they would want to make a model of the organ system? TTW explain that a model is a smaller representation of a real object. With a model, one can check to see how some of the materials that we will use to make the organ system will be harder, softer (TTW explain to TS that this is what engineers do when they test different materials for products and decide which one is best). TTW also have a chance in their model designs to see which materials are stronger or weaker and how would they make this model differently?</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Acts as a facilitator</li> <li><input checked="" type="checkbox"/> Observes and listens to students as they interact</li> <li><input checked="" type="checkbox"/> Asks good inquiry-oriented questions</li> <li><input checked="" type="checkbox"/> Provides time for students to think and to reflect</li> <li><input checked="" type="checkbox"/> Encourages cooperative learning</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Conducts activities, predicts, and forms hypotheses or makes generalizations</li> <li><input checked="" type="checkbox"/> Becomes a good listener</li> <li><input checked="" type="checkbox"/> Shares ideas and suspends judgment</li> <li><input checked="" type="checkbox"/> Records observations and/or generalizations</li> <li><input checked="" type="checkbox"/> Discusses tentative alternatives</li> </ul>	<p>Resources Models/bubble map</p> <p>Check for Understanding TTW ask TS to list the organs of the skeletal system. TSW key their responses in the chat after collaboration with a partner in the chat. TTW allow wait time for the TS to write down the bones and ligaments comprise the skeletal system. TTW have TS compare and contrast the different materials TS are using via the chat. TTW ask TS which substance will cause the bones to break the most? The least? TSW respond in the chat.</p>
<b>WE</b>	<p><b>Explain:</b> An activity where students can analyze their above exploration. Explain findings in their own words: “I</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Encourages students to explain their observations and findings in their own words</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Explains, listens, defines, and questions</li> <li><input checked="" type="checkbox"/> Uses previous observations and</li> </ul>	<p>Resources Bubble map/models</p>

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claim \_\_\_\_\_, and my evidence is  
\_\_\_\_\_”.

**Activity:**

**TTW ask TS are the bones in your models easily bent or broken? What would you use next time to make your model stronger?**

- Provides definitions, new words, and explanations
- Listens and builds upon discussion form students
- Asks for clarification and justification
- Accepts all reasonable responses

- findings
- Provides reasonable responses to questions
- Interacts in a positive, supportive manner

Check for Understanding  
TTW ask TS to continue comparing and contrasting materials in their models. TTW have TS use different materials to form their own conclusions about thie models. TTW show TS how to complete the bubble map for their models.

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<b>THURSDAY</b>	<p><b>Elaborate:</b> An activity which expands and solidifies thinking with an application to a real-world problem.</p> <p><b>Activity:</b>  <b>TW ask TS to bend their legs at the knees and at their elbows. TS should feel their bones. TTW explain the process of what happens when you eat a piece of food. TTW ask TS at the beginning of class to get something to eat. TS will begin eating at the same time. TTW explain what is happening to the piece of food that they are eating. For example, TTW say to TS that their teeth is grinding the food in their mouths. After the food is broken down, it will go through the esophagus. TTW point to the esophagus and ask TS if they feel the food there. TTW explain that the food item they ate will go to the stomach after it leaves the esophagus and that the food is broken down in the stomach and goes through the small intestine after it leaves the stomach. TTW tell TS that the energy they get from the food is because the blood picks it up from the small intestine and delivers it to the cells. TTW explain that the leftover food goes to the large intestine and the large intestine enables it to the exit the body. TTW do the same for digestive system. (See last week lesson plan about chewing gum for the respiratory system).</b></p>	<p style="text-align: center;"><b>Teacher Behaviors</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Uses previously learned information as a vehicle to enhance additional learning</li> <li><input checked="" type="checkbox"/> Encourages students to apply or extend the new concepts and skills</li> <li><input checked="" type="checkbox"/> Encourages students to use terms and definitions previously acquired</li> </ul>	<p style="text-align: center;"><b>Student Behaviors</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Applies new terms and definitions</li> <li><input checked="" type="checkbox"/> Uses previous information to probe, ask questions, and make reasonable judgments</li> <li><input checked="" type="checkbox"/> Provides reasonable conclusions and solutions</li> <li><input type="checkbox"/> Records observations, explanations, and solutions</li> </ul>	<p style="text-align: center;"><b>Resources Diagram</b></p> <p>Check for Understanding          TTW ask TS as a review to explain the function of each organ system studied this week. TSW work with a partner and advise. TTW then ask TS to use sticky notes of different colors or use colored pencils to circle their answers (arts integration). TSW then place each organ associated with the organ system in their notes using the sticky notes. TTW model this process. TTW for clarity, review the correct answers for this digestive and skeletal systems.</p> <p>Remediation/Enrichment - TTW work with Jaden Nutall, Kennedy Chase-Douglas, Joseph Walls, Davis Dorsey, Kanton Spires, Ryan Mack, Conner Jones, Jamarion Jones to ensure they get a clear understanding of what they are supposed to do. TTW provide leadership opportunities to Ayodele, Emery, Erin, Leanna, Kerrigan, Justus and Praziyah to collaborate via silent chats to assist their partners with making their models. Time permitting - TS will research one organ in the digestive system and find out how COVID - 19 affects it.</p>
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<b>FRIDAY</b>	<p><b>Evaluate:</b> An activity which assesses understanding in a way that both student and teacher get the opportunity to evaluate learning. Students show evidence of accomplishments.</p> <p><b>Activity:</b> <b>TTW teach Social Studies on Friday.</b></p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Observes student behaviors as they explore and apply new concepts and skills</li> <li><input checked="" type="checkbox"/> Assesses students' knowledge and skills</li> <li><input checked="" type="checkbox"/> Encourages students to assess their own learning</li> <li><input checked="" type="checkbox"/> Asks open-ended questions</li> </ul>	<p style="text-align: center;"><b>Student Outcomes for Mastery</b></p> <p><b>TSW will display 80% mastery on the final teacher made assessment.</b></p> <p><b>TSW list, identify and describe the major organ systems of the human body (organs in the respiratory system, digestive system, skeletal system and circulatory system).</b></p> <p><b>Students will learn the parts and functions of the skeleton by learning the names of some major bones and creating a model of the skeleton.</b></p> <p><b>Students will be able to identify the various parts of the digestive system. Students will be able to identify the function of the various parts of the digestive system.</b></p> <p><b>Students will be able to understand how the skeletal system, respiratory, digestive systems work together.</b></p>
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<p><b>Differentiated science instruction is data-driven, flexible, and meets the needs of all students understanding that</b>  <i>“One size doesn’t fit all!”</i></p> <ul style="list-style-type: none"> <li>○ Design each lesson based on student’s learning styles and/or multiple intelligences.</li> <li>○ Provide flexible grouping of students by shared interest, topic, or ability for assignments.</li> <li>○ Assess students’ learning using formative assessments.</li> <li>○ Manage the classroom to create a safe and supportive environment.</li> <li>○ Offer students’ choice <u>throughout</u> the learning process.</li> <li>○ Provide tiered learning by varying the complexity and depth of content for students.</li> </ul>			
<b>Differentiated strategies used today...</b>			
<input type="checkbox"/> Create Learning Stations	<input checked="" type="checkbox"/> Use the Think-Pair-Share	<input type="checkbox"/> Different Sets of Reading Comprehension Activities	<input type="checkbox"/> Choice Board
<input type="checkbox"/> Tiered Task Cards	<input type="checkbox"/> Journaling	<input checked="" type="checkbox"/> Assign Open-Ended Projects	<input type="checkbox"/> Learning Menu
<input type="checkbox"/> Interview Students	<input type="checkbox"/> Reflection & Goal Setting	<input type="checkbox"/> Encourage Students to Propose Ideas for Their Projects	<input type="checkbox"/> Jigsaw
<input checked="" type="checkbox"/> Target Learning Styles within Lessons (VAK)	<input type="checkbox"/> Literature Circles	<input type="checkbox"/> Graphic Organizer	<input type="checkbox"/> Learning Contracts
<input checked="" type="checkbox"/> Share Own Strength & Weakness	<input type="checkbox"/> Flexible Grouping	<input type="checkbox"/> Think Map	<input type="checkbox"/> Learning Log
<input checked="" type="checkbox"/> Other: Virtual chats	<input checked="" type="checkbox"/> Other: Models	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

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<b>Data-Driven Interventions for Intended Student Outcomes</b>			
<p><b><u>Remedial instruction</u></b> interjections are designed to close the gaps between what a student knows and what they are expected to know.  <b><u>Enrichment</u></b> offers a range of activities to extend students' access to and enjoyment of instruction.</p>			
General Education	Exceptional Education	Gifted Exceptional Education	English Language Learners
Remediation strategies used today...	Remediation strategies used today...	Remediation strategies used today...	Remediation strategies used today...
<input type="checkbox"/> Individual Educational Plan <input type="checkbox"/> Small Group Instruction <input type="checkbox"/> Trained Peer Supporter <input type="checkbox"/> One-on-One Instruction <input checked="" type="checkbox"/> Oral Expression <input checked="" type="checkbox"/> Written Expression <input checked="" type="checkbox"/> Provide Study Aids <input type="checkbox"/> Additional Practice <input type="checkbox"/> Task Analysis (breaking skill into smaller components) <input type="checkbox"/> Re-assess <input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Individual Educational Plan <input type="checkbox"/> Small Group Instruction <input checked="" type="checkbox"/> Trained Peer Supporter <input checked="" type="checkbox"/> One-on-One Instruction <input checked="" type="checkbox"/> Oral Expression <input checked="" type="checkbox"/> Written Expression <input checked="" type="checkbox"/> Provide Study Aids <input checked="" type="checkbox"/> Additional Practice <input type="checkbox"/> Task Analysis (breaking skill into smaller components) <input type="checkbox"/> Re-assess <input type="checkbox"/> Other:	<input type="checkbox"/> Individual Educational Plan <input type="checkbox"/> Small Group Instruction <input type="checkbox"/> Trained Peer Supporter <input checked="" type="checkbox"/> One-on-One Instruction <input checked="" type="checkbox"/> Oral Expression <input checked="" type="checkbox"/> Written Expression <input type="checkbox"/> Provide Study Aids <input type="checkbox"/> Additional Practice <input type="checkbox"/> Task Analysis (breaking skill into smaller components) <input type="checkbox"/> Re-assess <input type="checkbox"/> Other:	<input type="checkbox"/> Individual Educational Plan <input type="checkbox"/> Small Group Instruction <input type="checkbox"/> Trained Peer Supporter <input type="checkbox"/> One-on-One Instruction <input type="checkbox"/> Oral Expression <input type="checkbox"/> Written Expression <input type="checkbox"/> Provide Study Aids <input type="checkbox"/> Additional Practice <input type="checkbox"/> Task Analysis (breaking skill into smaller components) <input type="checkbox"/> Re-assess <input type="checkbox"/> Other:
Enrichment strategies used today...	Enrichment strategies used today...	Enrichment strategies used today...	Enrichment strategies used today...
<input type="checkbox"/> More Challenging Reading <input type="checkbox"/> Attend to Trends and Patterns <input type="checkbox"/> Problems w/o Clear Solutions <input type="checkbox"/> Complex Topics Based on <input checked="" type="checkbox"/> Student Interests <input checked="" type="checkbox"/> Encourage Creativity <input type="checkbox"/> Reward Risk-Taking <input type="checkbox"/> Other:	<input type="checkbox"/> More Challenging Reading <input type="checkbox"/> Attend to Trends and Patterns <input type="checkbox"/> Problems w/o Clear Solutions <input type="checkbox"/> Complex Topics Based on <input checked="" type="checkbox"/> Student Interests <input checked="" type="checkbox"/> Encourage Creativity <input type="checkbox"/> Reward Risk-Taking <input type="checkbox"/> Other:	<input type="checkbox"/> More Challenging Reading <input type="checkbox"/> Attend to Trends and Patterns <input type="checkbox"/> Problems w/o Clear Solutions <input type="checkbox"/> Complex Topics Based on <input checked="" type="checkbox"/> Student Interests <input checked="" type="checkbox"/> Encourage Creativity <input checked="" type="checkbox"/> Reward Risk-Taking <input type="checkbox"/> Other:	<input type="checkbox"/> More Challenging Reading <input type="checkbox"/> Attend to Trends and Patterns <input type="checkbox"/> Problems w/o Clear Solutions <input type="checkbox"/> Complex Topics Based on <input type="checkbox"/> Student Interests <input type="checkbox"/> Encourage Creativity <input type="checkbox"/> Reward Risk-Taking <input type="checkbox"/> Other: