



UNIT GRAPHIC ORGANIZER

SUBJECT: Science

UNIT: 2

COURSE: Fourth

TEACHER: Paola Bustacara – Flor Alba Novoa

DATE: April 15th -2024

The human body: A complex machine

THROUGHLINES:

1. What would happen to us if we didn't have bones?
2. What is the nutrition of athletes to be winners?
3. what kind of food can be consumed to grow more?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

<p>The student will comprehend how muscles and bones work together making a didactic hand establishing relations between ligaments, tendons, muscles, and bones explaining how they interact to move.</p>	<p>The student will recognize how to care for muscular and skeletal systems with healthy food experimenting with chicken bones and coke explaining the importance of a healthy diet to prevent diseases writing a laboratory report.</p>	<p>The student will relate how muscles and bones create body movements with the functioning of mechanical machines by designing a mechanical arm that will simulate the movements of articulations, tendons, and muscles explaining the relationship between the machines and the human body.</p>
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	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	CRITERIA

<p>Exploration Stage</p>	<ul style="list-style-type: none"> - To identify the different functions and organs of the skeletal and muscular systems in the human body. - To relate the importance of movement with the characteristics of the skeletal and muscular systems in the human body. 	<p style="text-align: center;">Weeks: 2</p>	<p>Watching animated videos that will help the student have a better understanding of the concepts and processes concerning the skeletal system.</p> <p>Identifying how the bones help the human body and how is possible to identify pathologies by modeling and comparing bones with and without osteoporosis.</p> <p>Developing mind maps by creating brainstorm about skeletal and muscular systems.</p> <p style="text-align: center;">Synthesis project stage 1 “Noti Kids Trois”</p> <p>Selecting and organizing students in groups of five students obtaining six work groups according to their skills.</p> <p>Identifying roles of each student in the creation of the project from different subjects.</p> <p>In the first step writing the following problem: How can you reduce the global warming in your community? (Stem process. ASK), next, what are some ways to solve the problem? (IMAGINE), then What are we going to do to solve the problem (PLAN) working a news program taking into account the different kind of roles for students (journalist, host, guest, writers and others).</p>	<ul style="list-style-type: none"> - To know the relation between muscles and bones through the collected information.
<p>Guided Stage</p>	<ul style="list-style-type: none"> - To understand the relationship between skeletal and muscular system. - To comprehend the importance of good nutrition and how this can affect organs such as bones and muscles. 	<p style="text-align: center;">Weeks: 3</p>	<p>Describing how bad nutrition affects the human bones, and what types of diseases are produced.</p> <p>Writing a healthy menu and explaining the benefits.</p> <p>Experimenting with bones and Coke to establish the relation between the type of diet and bone diseases.</p> <p>Solving a guide report that shows the importance of a healthy diet, taking into account question, hypothesis, materials, steps, observations and conclusions.</p> <p style="text-align: center;">Synthesis project stage 2 “Noti Kids Trois”</p>	<ul style="list-style-type: none"> - To answer questions with different valid arguments. - To establish differences between description, explanation, and evidence.

<p>Learning Evidence</p>	<p>Desining a draft taking into account the principal topic Global Warming (causes, consequences and how children can help to solve this environmental problem-science)</p> <p>Creating the script for the news program according to the components and the roles taking into account different subjects like math, geography, science, history, Spanish, english, dance, art, etc.</p> <ul style="list-style-type: none"> - To analyze the different types of simple machines and explain their functions relating them to everyday activities. - To identify some simple machines in skeletal and muscular systems, and their relation with the human body motion. 	<p>Weeks: 3</p>	<p>Making and analazing bar graphs about the length of the upper arm bone of some people in their classroom, drawing a bar graph to show their results.</p> <p>Identifying some simple machines and making some movements to recognize the human body as a human machine.</p> <p>Solving activities from the science guide making use the scientific language learned.</p> <p>Synthesis project stage 3 “Noti Kids Trois”</p> <p>The students will develop a performance about the global warming features (causes, consequences, advices and steps for controlling it) bearing the big question according to your point of view How can you reduce the global warming in your community? By a news program taking to account the rubric criteria for oral presentation (pronunciation, vocabulary, interactive communication and proper use of grammar) Also they will wear customs, accessories and help their presentation with visual aids and backgrounds.</p>	<ul style="list-style-type: none"> - To apply concepts to different situations.
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