



UNIT GRAPHIC ORGANIZER

SUBJECT: Science

UNIT: 4

COURSE: Fourth

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DATE: September 12th 2022

TITLE: The matter and its properties, tools in the forensic science.

THROUGHLINES:

Does my body have atoms?
Do I have mixtures in my body?
How can I be a scientist?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

<p>The students will recognize the importance of the atom to relate it with properties of matter through different experiments and writing lab reports as evidence.</p>	<p>The students will comprehend the characteristics of mixtures and their methods of separation to identify several mixtures from their daily life making some recipes in the kitchen and creating a folding with different dishes and mixtures as evidence.</p>	<p>The students will analyze different facts in a crime scene using the steps of scientific method to discover who is guilty of the crime writing a report of the investigation with all the evidences.</p>
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	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	
			CRITERIA	
Exploration Stage	<ul style="list-style-type: none"> - To identify the general and specific characteristics of an atom. - To relate the properties, states, and changes of matter through experiments 	Week 3	<p>Brainstorming Listening different ideas about the atom and then Watching videos the students will make a map with the information. https://www.youtube.com/watch?v=BvYiMnRN_A https://www.youtube.com/watch?v=R1RMV5qhwYE</p> <p>Vocabulary practice Characterizing different objects made of several materials using a chart with the intensive and extensive properties of matter.</p> <p>Synthesis project (1st sketch)</p> <p style="text-align: center;">“FORENSIC INVESTIGATION” Case description</p> <p>Writing the facts about the crime scene Three suspects were found in the place with different substances. Who do you think was the guilty of the crime? Write your hypothesis</p>	<p>-To know the relation between atoms, matter, and properties.</p>

<p>Guided Stage</p>	<ul style="list-style-type: none"> - To analyse the characteristic of the different types of mixtures. - To describe the different types of mixtures and their separation methods. 	<p>Weeks 3</p>	<p>Mixtures scientific laboratory Will make different objects to observe the differences between the homogeneous and heterogeneous mixtures. They will have to evaluate and analyze the procedure, observation to perform a laboratory report based on the scientific method.</p> <p>Methods of separation scientific laboratory With diverse methods they will have to separate objects like metal fillings with salt, water and oil, flour, among others.</p> <p>Volume, capacity, mass, and weight Identifying different objects to measure mass, weight, volume, and capacity as well as making bar graphs that represent these measures.</p> <p>Synthesis project (2nd sketch)</p> <p style="text-align: center;">“FORENSIC INVESTIGATION” Process of the research</p> <p>You must describe some intensive properties of the substances found in the place of the crime. Observe what occurs when testing the 3 white powder residues with water, vinegar, and iodine complete the charts and report crime scene investigation.</p>	<p>To answer questions with different valid arguments about types of mixtures.</p> <p>To establish differences, description, explanation, and benefits of separation of mixtures</p>
<p>The Learning Evidence</p>	<ul style="list-style-type: none"> - To understand the concepts of mass and volume as well as relating them in everyday situations. - To analyse the property of density and its characteristics. 	<p>Weeks 2</p>	<p>Density scientific laboratory Making a laboratory using different objects and liquids to understand how the density affects the matter. The students will have to apply the scientific method to understand the concept of DENSITY.</p> <p>Animated Videos: Watching videos about density answering why do some things float? and doing mathematical and experimental determination of density of several objects</p> <p>Synthesis project (3rd sketch)</p> <p style="text-align: center;">“FORENSIC INVESTIGATION” Report the results</p> <p>It’s time to check the results using the collected data and write a conclusion to say who is guilty, besides explain why the investigation is important to solve any case not only crimes.</p>	<p>To establish differences between volume, capacity, mass, and weight using graphs</p> <p>To answer questions with different valid arguments about density.</p>