UNIT GRAPHIC ORGANIZER

SUBJECT: Science **TERM: 2** **COURSE: Second**

TEACHER: Tatiana Calderón **DATE: April 9th, 2025**

TITLE: ENVIRONMENTS COMPONENTS AND MATTER

THROUGHLINES:

1. What elements are present in plant changes?
2. How clouds are part of states of matter?
3. How do we understand matter?
4. What elements compose the living and non-living environments?

GENERATIVE TOPIC

"MONSTERS INC"

. **UNDERSTANDING GOALS:**

Students will recognize stages in plants changes putting in practice previous learning from life cycle through observation of a visual timeline and with a school travel journey in order to identify different stages in plants growing to create a short field log and write the results from the expedition.	Students will learn the main characteristics of the different states of matter through experiential experiences in the laboratory using different elements to identify solids, liquids and gasses to identify the composition of the substances in a lab report.	Students will categorize soil, flora and fauna according to their characteristics in living and non- living environments trough comparisons and graphs in order to recognize biotic and abiotic components information of the surroundings.

	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		**WAYS**	**CRITERIA**
Exploration Stage	• To remember plants life cycle by recognizing characteristics from plants changes and their growing process. • To identify how are created the states of matter and physic change factors (heat, pression or chemical reactions). • To learn what elements are biotic and abiotic in the environment comprehending soil, fauna and flora functions in it.	**3 Weeks**	• Matching parts of the plant on the board with students and remembering plants stages in the growing process with technology tools (games and readings in web sides) https://www.ecosystemforkids.com/life-cycle-diagrams-of-animals.html https://www.natgeokids.com/uk/discover/science/nature/the-life-cycle-of-flowering-plants/ • Knowing the characteristics of a solid, liquid and gas through an important video, then the students will play hot potato and they will answer questions related to each of the states of matter. • Singing the song "solid liquid or gas" with which the function of each of the states of matter will be recognized, afterwards, they will be shown some elements such as cubes, bottles, erasers, water, lemonade, images of steam, air and smoke so that they can identify the state of matter to which they correspond, giving an explanation about it. • Learning what are the biotic and abiotic components and recognizing in different environments contexts trough observation (not just natural places, also man-made environments) https://wordwall.net/en-us/community/abiotic-and-biotic-factors	• To observe specific phenomena. • To collect information and present them in an organized and coherent way. • To achieve comparison and contrasting skills trough deep observation and argumentative ideas.

Guided Stage	• To compare the plants change stages in an observation exercise to recognize the difference between them. • To identify different objects from the classroom, related to the states to the matter. • To classify relevant information about living and non-living components applying learning in graphic representation through biotic and abiotic spheres representation.	**2 Weeks**	• Going in a school expedition looking for the plant change stages around the school territory, students will carry a magnifying glass which is going to increase motivation in the searching exercise. Then, they will write a short field log about the results. • Making different type of experiments in which students are going to in the laboratory (otherwise, the classroom) where elements of every life day will be used to classify the various states of matter and write the process their favorite one carrying on criteria from scientific method steps. • Creating an illustration where students are going to represent two spheres: Biotic and abiotic, from a same place. Students will have to recognize living and non-living components in it using items to classify the information in the drawings made.	• To use plants correct vocabulary and knowledge for a successfully exploration. • To register the results in an organized way, without alterations. • To classify information and recognize daily routine places environmental components.
Learning Evidence	The objective of the MONSTER INC project is for students to identify the elements that contribute to improving our health and to understand how we can prevent infections caused by microorganisms, developing an antibacterial soap as a product that will allow them to stay protected.	**2 Weeks**	This project will be related with science in the students´ living being's introduction focused on the microorganisms (bacteria, viruses) and their characteristics, with the purpose of discussing their roles of microorganisms in health, both beneficial (e.g., gut bacteria) and harmful (e.g., disease-causing bacteria). Acquiring the understanding about handwashing.	To recognize what components attack bacterias better than viruses and identify the phenomena.