

UNIT GRAPHIC ORGANIZER



SUBJECT: Science

UNIT: 4

COURSE: Fifth

TEACHER: Diana Totena – Flor Alba Novoa

DATE: September 11th -2024

The universe

THROUGHLINES:

1. How was our Earth planet formed?
2. What objects can I find in the outer space?
3. How do astronomers explore the universe?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

The student will comprehend the origin of the universe and the life taking into account different theories like the Big Bang and Spontaneous generation through creation of timelines to show important moments of universe formation.	The student will recognize the characteristics of different celestial bodies in the universe by analyzing composition, distance from the sun and gravity through graphics to relate mass, weight and gravity about different planets.	The student will understand the importance of scientific and technological advances in the explanation of the universe making a telescope model in order show the importance of the advances to explore the universe.
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	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	CRITERIA
Exploration Stage	<ul style="list-style-type: none"> •To recognize evidence that supports theories about the origin of the universe and life on Earth. •To identify different scales in the structure of matter, related to the Big Bang theory. To understand the organization of our current solar system. 	Weeks: 3	<ul style="list-style-type: none"> •Analyzing videos about the origin of the universe https://es.educaplay.com/juego/10392196-the_beginning_of_everything.html •Critical reading about How did the universe begin? • Creating a timeline to show the characteristics from the creation of the universe in the Big Bang until the proliferation of life on the Earth. • Learning about theories that explain the origin of the life (Spontaneous generation, Panspermia, Abiogenesis.) <p>SYNTHESIS PROJECT Preserve, observe and serve. with a handmade craft dehydrator Watching an Informative video about the importance, benefits and care of aromatic plants and species. https://www.youtube.com/watch?v=FJQXaYIo8d0 Tasting day in the break Creation of groups and roles (3 children per group). Student No 1 will investigate the origin and properties, student No 2 benefits, and student No 3 how to care for aromatic plants and species. They will begin to write a logbook about the plants and all the steps for the synthesis project</p>	Identify different theories about how the universe and life on Earth could have originated.

<p>Guided Stage</p>	<ul style="list-style-type: none"> •To compare characteristics of different celestial bodies such as stars, planets, comets, asteroids, meteors, etc. •To describe the effect of gravity in the change of weight on different planets. 	<p>Weeks: 3</p>	<ul style="list-style-type: none"> •Analysing videos about the characteristics of different planets. https://es.educaplay.com/recursos-educativos/10208480-solar_system.html •Exploring NASA'S platforms https://spaceplace.nasa.gov/menu/solar-system/ • Making a solar system scroll, to scale the distance between planets of the Solar System. • MAKING GRAPHS Calculating the weight of each student on the 8 planets of the Solar System, taking into account their mass and the gravity of other planets. SYNTHESIS PROJECT "Preserve, observe and serve with a handmade craft dehydrator." *(STEM PROCESS) ASK: How to dehydrate aromatic plants and species in order to produce, serve and consume for healthy purposes? *IMAGINE: how to make a handmade craft dehydrator using different materials. According to the sustainable development goals No 12 (Responsible consumption and production *Watching videos about what is a handmade craft dehydrator https://www.youtube.com/watch?v=vbKIREdwjwg *PLAN: To establish the materials and steps for designing and making the handmade craft dehydrator then the first step to build the dehydrator. 	<p>Record characteristics about celestial bodies in the solar system.</p>
<p>Learning Evidence</p>	<ul style="list-style-type: none"> •To distinguish functions and structures of the needed components of artificial satellites. •To understand the importance of scientific and technological advances in the exploration of the universe. 	<p>Weeks: 2</p>	<ul style="list-style-type: none"> • Exploring NASA'S platforms -https://eyes.nasa.gov/curiosity/ -https://hubblesite.org/mission-and-telescope/the-telescope •Discussing some facts and hypotheses about potentially habitable exoplanets, based on an inquiry about the NASA's Exoplanet Exploration Program. •Making a telescope to recognize advances to explore the universe. <p>SYNTHESIS PROJECT "Preserve, observe and serve. With a handmade craft dehydrator." Step No 2 finish to create the dehydrator taking into account different materials. At the end of the term the logbook will be evaluated according to the rubric. In the fourth term, test dehydrator and observe what is necessary to improve? the students will write their observations in the logbook, next they will macerate or crush the aromatic plants and species, if they are correctly dehydrated and preserved, then they will be packaged and the students will do the oral presentation using their logbook information, their dehydrator and the packaged plant as evidences about the process for the synthesis project. (Spanish, history, science, math, geography, English, French and citizen competence)</p>	<p>Explain how technological advances have been important to explore the universe.</p>