



UNIT GRAPHIC ORGANIZER

SUBJECT: SCIENCE

UNIT: 3

COURSES: SIXTH GRADE

TEACHER: NOELIA VEGA / CAMILA CASTELLANOS

DATE: JULY 11th 2022

TITLE:

ECOLOGY: CLOSED SYSTEMS

THROUGHLINES:

- Can human-made sites be part of an ecosystem?
- How do organisms interact between them?
- What factors are indispensable for the development of organisms in an ecosystem?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

<p>The student will comprehend the differences between biotic and abiotic factors, their relation in the ecosystems and how they get the energy necessary for living, by the analysis of real-life cases recording this in infographics.</p>	<p>The student will relate the interactions between biotic and abiotic factors with the characteristics of terrestrial ecosystems through observation and methodical recording in a field journal about the changes that occur in a microecosystem constructed by the student, so that he/she can demonstrate that ecosystems are fragile, complex and changing and that they can be modified and restored.</p>	<p>The student will understand the main characteristics, interactions between factors and biotic composition of the aquatic ecosystems by the development of a marine profile recognizing the main characteristics of an aquatic ecosystem by means of a marine ecosystem presentation.</p>
--	---	---

	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	CRITERIA
Exploration Stage	<ul style="list-style-type: none"> • To establish differences between non-living thing and abiotic factor. • To recognize the trophic levels in an ecosystem. • To establish the importance of maintaining a well-balanced population of organisms. 	3 weeks	<p><i>Construction of my ecosystem</i>, what would I find in my ecosystem, what factor would I eliminate?</p> <p>Reading comprehension Reading and completing exercise of the book Unit 5 (chapter 13-14) Pages 230-237</p> <p>Virtual laboratory (Estimating population size) Simulating the mark and recapture method to estimate the population of grasshoppers in a field. https://www.youtube.com/watch?v=olusfsR6it0</p> <p>Synthesis Project 1st checking (Building nature) Establishing) the characteristics (materials and process) of the microecosystem that is going to be created. Researching the main cycles that occur within a closed system (bottled microecosystem) and begin with the elaboration of the ecological report, Taking into account two indispensable factors for its creation and establishment: sunlight and presence of plants</p>	<p>Register observations and results using graphs, tables, or diagrams</p>

<p>Guided Stage</p>	<ul style="list-style-type: none"> • To recognize different land ecosystems. • To establish specific characteristics of each terrestrial ecosystem. • To identify different biotic and abiotic factors that interact in each ecosystem. 	<p>3 weeks</p>	<p>Reading comprehension Book Unit 5 (chapter 15) Pages 262-268</p> <p>Comparative analysis Developing a comparative chart about land ecosystem considering biotic and abiotic factors. Building a biome based on the characteristics learned. https://switchzoo.com/games/buildabiome.htm.</p> <p>Synthesis Project 2nd checking (Building nature) Taking the first observations of the microecosystem finding differences in time like, possible organisms present, presence of algae or plants, change in colorations, presence of condensation and water cycle.</p>	<p>Compare differences and similarities between land biomes.</p>
<p>Learning Evidence</p>	<ul style="list-style-type: none"> • To recognize different aquatic ecosystems. • To establish specific characteristics of each aquatic ecosystem. • To identify different biotic and abiotic factors that interact in each ecosystem. 	<p>2 weeks</p>	<p>Reading comprehension Book Unit 5 (chapter 16) Pages 269-273</p> <p>Virtual Didactics Exploring freshwater ecosystems using an interactive web site https://nearpod.com/t/science/3rd-grade/freshwater-ecosystems-L379528</p> <p>Creation of a marine profile Establishing the zones based on the vertical column of water in the ocean. Analysing the relation between each zone and the organisms present in them.</p> <p>Synthesis Project last checking (Building nature) Presenting the ecological report based on the characteristics made during the complete term. The students will have to make analysis of predictions and observations.</p>	<ul style="list-style-type: none"> • Respect and take care of living beings and elements in the environment.