



UNIT GRAPHIC ORGANIZER

SUBJECT: BIOLOGY

UNIT: 4

COURSE: SIXTH GRADE

TEACHER: Natalia Zamudio

DATE: September 11 / 2024

ECOLOGICAL THINKING- THE EARTH AND LIFE HISTORY

THROUGHLINES:

- Which are the most common environmental problems in your city?
- Do you know how plate tectonics move?
- How old is the Earth?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

The student will comprehend environmental problems and ecological solutions in their daily context, by analyzing the ecological footprint each student has on earth.	The student will comprehend how tectonic plates move and how different continents and earth structures were created, by recognizing the history of the planet through workshops and activities.	The student will understand the evolution of geological eras through a timeline that will allow them to identify the changes in the characteristics of the organisms present on Earth.
--	---	--

	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	CRITERIA
Exploration Stage	<ul style="list-style-type: none"> • To recognize environmental problems in the city and suggest ecological solutions. • To take care of the planet through actions that protect it (3-Rs). • To identify differences between renewable and no renewal resources. • To identify inner structure of the Earth. • To recognize the three tectonic plates boundaries (divergent – convergent – transform) and their characteristics. 	3 weeks	<p>Reading Skills</p> <ul style="list-style-type: none"> • Reading and completing exercises from the book chapter 16 (Page 276 to 281 and 284 to 286). • Calculating Ecological footprint impact using https://www.footprintcalculator.org/home/en • Analyzing the most common resources used daily and proposing actions to reduce them. • Reading and writing information about plate tectonics. • Solving activities about movement of plate tectonics and consequences of them. • Making some simulations about plate boundaries using analyzing the creation of various geological features caused by the movement of tectonic plates: https://www.amnh.org/explore/ology/earth/plates-on-the-move2/game <p>SYNTHESIS PROJECT 1</p> <p>SYNTHESIS PROJECT 1 • To make an introduction to the synthesis project to be developed throughout the term about water filters. • A project kickoff event where Sustainable Development Goal #6: CLEAN WATER AND SANITITUDE will be discussed in detail. • Students will be</p>	<p>Respect and take care of living beings and elements in the environment</p> <p>Identify and use specific vocabulary to define the evolution of planet Earth.</p>

			<p>organized into groups where they will choose their roles according to their abilities. These roles are suggested by the teachers and are as follows • Project leader , Scientific researcher, Design Engineer, Manufacturer/Technician, Data Analyst and Facilitator/Communicator</p>	
Guided Stage	<ul style="list-style-type: none"> To know what a fossil is and how it originated, and how it is related to the evolution of Earth. To establish how different organisms evolved under different geological and climatic conditions in every geological era. To recognize the characteristics of each geologic era. 	3 weeks	<p>Reading Skills</p> <ul style="list-style-type: none"> Reading the fossil record: section 12.1 (Pages 206 to 208). Reading the Geologic Time Scale: section 12.2 (Pages 209 to 210). Observing how are fossils made by watching the video: https://www.youtube.com/watch?v=87E8bQrX4Wg Learning about types of fossils https://www.youtube.com/watch?v=PTQRY8i4HgY Using web sites “Stories from fossil record” Illustrating how fossils are related to geological times and changes in biodiversity:https://ucmp.berkeley.edu/education/explorations/tours/stories/middle/G3.html <p>SYNTHESIS PROJECT 2</p> <ul style="list-style-type: none"> Students must conduct research on existing types of water filters as background for creating their prototype. Both the research and the prototype development should be documented in their logbook After designing their sketch, students should choose optimal materials for its development. The development process will take two weeks. The filter production process must be documented, describing the experience and including images, all in the logbook. 	Register observations and results using graphs, tables or diagrams.
Learning Evidence	<p>SYNTHESIS PROJECT CLASS MEMORIES</p> <p>To create a frieze based on topics seen in class. Afterwards, students will present their ideas to their classmates.</p>	2 weeks	<p>SYNTHESIS PROJECT 3</p> <ul style="list-style-type: none"> Students are required to submit a working prototype of their filter, along with a comprehensive record of the entire development process in their logbook. This logbook should encompass background research (including previous studies), several prototype sketches, the selection of materials and their justification, the construction record of their filter, and documentation of contributions from different subjects to the project. These deliverables are due in the third term; in the Listen actively his/her classmates, recognize other points of view, compare, and modify his/her ideas using better arguments. fourth term, they will test their prototype, identifying improvements based on the central problem statement, and establish the optimal implementation and monitoring methods. Furthermore, the logbook must be written in English, French, and Spanish. 	Listen actively his/her classmates, recognize other points of view, compare, and modify his/her ideas using better arguments

--	--	--	--	--