

Standard Division Document School Year 2016-2017

Course: Earth and Environmental Science

Last Update June 2016

<b>Timeframe</b>	<b>Objectives</b>	<b>Clarifying Objectives/Main Concepts</b>
<b>1<sup>st</sup> 6-weeks</b>	EEn.1.1 Explain the Earth’s role as a body in space.	EEn.1.1.1 Explain the Earth’s motion through space, including precession, nutation, the barycenter, and its path about the galaxy. EEn.1.1.2 Explain how the Earth’s rotation and revolution about the Sun affect its shape and is related to seasons and tides. EEn.1.1.3 Explain how the sun produces energy which is transferred to the Earth by radiation. EEn.1.1.4 Explain how incoming solar energy makes life possible on Earth.
	EEn.2.3 Explain the structure and processes within the hydrosphere EEn.2.4 Evaluate how humans use water.	EEn.2.3.1 Explain how water is an energy agent (currents and heat transfer). EEn.2.3.2 Explain how ground water and surface water interact EEn.2.4.1 Evaluate human influences on freshwater availability. EEn.2.4.2 Evaluate human influences on water quality in North Carolina’s river basins, wetlands and tidal environments.
<b>2<sup>nd</sup> 6-weeks</b>	EEn.2.5 Understand the structure of and processes within our atmosphere	EEn.2.5.1 Summarize the structure and composition of our atmosphere. EEn.2.5.2 Explain the formation of typical air masses and the weather systems that result from air mass interactions. EEn.2.5.3 Explain how cyclonic storms form based on the interaction of air masses. EEn.2.5.4 Predict the weather using available weather maps and data (including surface, upper atmospheric winds, and satellite imagery). EEn.2.5.5 Explain how human activities affect air quality EEn.2.6.1 Differentiate between weather and climate.
	EEn.2.1 Explain how processes and forces affect the lithosphere.	EEn.2.1.1 Explain how the rock cycle, plate tectonics, volcanoes, and earthquakes impact the lithosphere. EEn.2.1.2 Predict the locations of volcanoes, earthquakes, and faults based on information contained in a variety of maps.

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		<p>EEn.2.1.3 Explain how natural actions such as weathering, erosion (wind, water and gravity), and soil formation affect Earth’s surface.</p> <p>EEn.2.1.4 Explain the probability of and preparation for geohazards such as landslides, avalanches, earthquakes and volcanoes in a particular area based on available data</p> <p>EEn.2.2.2 Compare the various methods humans use to acquire traditional energy sources (such as peat, coal, oil, natural gas, nuclear fission, and wood).</p> <p>EEn.2.8.2 Critique conventional and sustainable agriculture and aquaculture practices in terms of their environmental impacts.</p>
<p><b>3<sup>rd</sup> 6-weeks</b></p>	<p>EEn.2.7 Explain how the lithosphere, hydrosphere, and atmosphere individually and collectively affect the biosphere.</p>	<p>EEn.2.7.1 Explain how abiotic and biotic factors interact to create the various biomes in North Carolina.</p> <p>EEn.2.7.2 Explain why biodiversity is important to the biosphere.</p> <p>EEn.2.7.3 Explain how human activities impact the biosphere</p> <p>EEn.2.8.3 Explain the effects of uncontrolled population growth on the Earth’s resources.</p>
	<p>EEn.2.2 Understand how human influences impact the lithosphere.</p> <p>EEn.2.6 Analyze patterns of global climate change over time.</p> <p>EEn.2.8 Evaluate human behaviors in terms of how likely they are to ensure the ability to live sustainably on Earth.</p>	<p>EEn.2.2.1 Explain the consequences of human activities on the lithosphere (such as mining, deforestation, agriculture, overgrazing, urbanization, and land use) past and present.</p> <p>EEn.2.6.2 Explain changes in global climate due to natural processes.</p> <p>EEn.2.6.3 Analyze the impacts that human activities have on global climate change (such as burning hydrocarbons, greenhouse effect, and deforestation).</p> <p>EEn.2.6.4 Attribute changes to Earth’s systems to global climate change (temperature change, changes in pH of ocean, sea level changes, etc.).</p> <p>EEn.2.8.1 Evaluate alternative energy technologies for use in North Carolina.</p> <p>EEn.2.8.4 Evaluate the concept of “reduce, reuse, recycle” in terms of impact on natural resources.</p>