

Tentative SYLLABUS: EARTH AND ENVIRONMENTAL SCIENCE-Fall 2024; Mr. Green, B-18 (Subject to Change)

Week/Date	Topic	Activities	EEn Objective	CK-12 Chapter Readings
1. 8/19-23	Intro to Science	Getting to Know You! Expectations/Goals; Review scientific methods, measuring. Practice Final. Start Notebooks	N/A	1
2. 8/26-30	Measuring & spatial dimensions	FLDA, problems; skills practice: use of models; map reading, orienteering, compass use locating yourself on earth and in space. Review note books every week		2
3. 9/2-6	Earth Chemistry/ Minerals	Earth Chemistry /Chemistry Basics-elements, molecules, compounds, bonding types, labs and activities	2.1, 3,1	3.1
4. 9/9-13	Minerals	Minerals characteristics and properties; importance of minerals -research uses and extraction	2.4	3.2-3.4
5. 9/16-20	Rocks	Rock types, formation, uses: Igneous rocks-Activities: Types of volcanoes; Shield Volcanoes, Sedimentary & Metamorphic Rocks, rock cycle	2.1 2.2, 2.4,2.5	4,8,11,12
6. 9/23-27	Mining/ Energy	Mining types of mining (pros and cons); NC natural resources; Energy resources; conservation	5.4, 5.5,6.1-6.3	3.5,5, 20
7. 9/30-10/4	Internal Processes	Conventional and Alternative Energy Resources STEM Investigations	5.4-5.5, 6.1-6.3	3.5,5,20
8. 10/7-11	Internal Processes	Earth's Layers-Seismology (P/S waves); Earthquakes, Structural Geology (stress and strain) Earthquake resistant structures	6.2-6.3	7
9. 10/14-18	Internal Processes	Plate Tectonic Theory Geohazards-forecasting, prevention	2.1,2.3,6.34	6, 14.3
10. 10/21-25	Surficial Processes	Weathering rates; mass wasting and erosion; soil formation, biogeochemical cycles (N and C); agriculture,	2.4	9, 18.2
11. 10/28-11/1	Surface Processes-Hydro	Importance of water; water budget, heat transfer in ocean, geographic distribution, river and groundwater basics	3.1-3.4	10,13,14
12. 11/4-8	Surface Processes	Our water Use: Pigeon River watershed case studies; water quality issues; global water crisis; ocean pollution	3.1-3.4, 6.1-6.3	10,13,14
13. 11/11-15	Meteorology Atmosphere	Atmosphere review, weather systems, forecasting, pollution	3.5, 4.2, 5.3	15, 16, 22
14. 11/18-22	Meteorology Climate	Introduction to climate; natural changes (climatographs) and human influences; Climate Debate-How to address the changing climate responsibly?	2.4, 4.2-4.3, 3.3,	17, 18.2
15. 11/25-29	Biodiversity	The biosphere-biomes, ecosystems, importance & threats, sustainability, human population trends, solid and e-waste (NIMBY/BANANA), limiting resources, 4R's, Human Population Debate-What is our carrying capacity?	2.7, 4.1, 5.5, 6.1, 6.2, 6.3	14.4, 18.3 19
16. 12/2-6	Astronomy	Modeling the hierarchy of space; motion-rotation, revolution, Kepler's Laws, Gravity; seasons, theories of origin of the universe, solar system, earth, moon (phases, eclipses, tides), importance of solar energy to life on earth.	1.1-1.4	23,24, 25, 26
17. 12/9-13	Review	Catch up / Review Week		
18. 12/16-20	Review/Exam	Finals Week		

