Tentative SYLLABUS: HONORS EARTH AND ENVIRONMENTAL-Fall 2025; Mrs. Miller, C-11 (Subject to Change)

Week/Date	Topic	Activities	EEn Objective
1. 8/18	Intro to Science	Getting to Know You! Expectations/Goals; Safety First; scientific methods, measuring. Final Practice; **S**cience **A**rticle **S**ummaries	N/A
2. 8/25	Measurements and spatial dimensions	FLDA, problems; lab skills practice: use of models; map reading, orienteering, compass use; Field trip: Water Quality Analysis	2.1, 2.3
3. 9/1	Earth Chemistry/ Minerals	Earth Chemistry /Chemistry Basics-labs and activities **Design Research Project/SAS**; **progress reports/**	2.1
4. 9/8	Minerals/Rocks	**Minerals** characteristics and properties; importance of minerals -research uses and extraction	2.1
5. 9/15	Rock Cycle	**Rock** types, formation, uses: Igneous rocks-Activity: Shield Volcanoes, Sedimentary & Metamorphic Rocks	2.1, 2.4, 2.5
6. 9/22	Mining/Energy	Mining types of mining (pros and cons); NC natural resources; energy resources; conservation **Project:Home Energy Audit; SAS; report card**	2.1, 5.1, 5.4,
7. 9/29	Internal Processes	Earth's Layers-Seismology-P/S waves; Earthquakes, Structural Geology	2.3 2.4
8. 10/6	Internal Processes	Plate Tectonic Theory Geohazards-forecasting, prevention	2.2, 2.4, 6.2, 6.3
9. 10/13	Surficial Processes	Weathering rates; mass wasting and erosion; soil formation**;** biogeochemical cycles, agriculture; soil degradation;Field Trip:? **progress report/SAS**	2.4, 4.4, 5.1, 6.3
10. 10/20	Surficial Processes Hydro Studies	Properties of water, Importance of water; water budget, heat transfer in oceans, geographic distribution, river and groundwater basics **Field Trip: Richland Creek-water quality**	3.1, 3.2, 3.5
11. 10/27	Surface Processes, Uses	Our water use: Pigeon River watershed; case studies, water quality; global water crisis; ocean pollution **Field Trips: Water Treatment Plant**	5.1, 5.2, 6.2, 6.3
12. 11/3	Meteorology	**Atmosphere** Introduction/ atmospheric characteristics, weather characteristics-**Weather Project:Cloud cover** Tools, clouds, layers, station models, pressure systems, air masses, severe weather, interpreting maps, forecasting; **SAS**; **report card**	2.5, 3.2, 3.3, 3.4
13. 11/10	Meteorology Climate	Introduction to climate; natural changes (climatographs) and human influences; primary and secondary pollution- Climate Debate-How to address the changing climate responsibly?	2.5, 3.5, 5.3, 6.2
14. 11/17	Ecosystem/Biodiversity	Biosphere-biomes, ecosystems, importance and threats **Research Project Due**	3.6, 4.1, 4.2, 4.3
15. 11/24	Sustainability/ Human Impact	Sustainability, human population trends, solid and e-waste (**NIMBY/BANANA**), limiting resources, 4R's, Human Population Debate-What is our carrying capacity? **SAS**, **Progress report**	2.7, 4.4, 4.5, 5.5 , 5.6, 6.1,
16. 12/1	Astronomy	Hierarchy of space; models of solar system, motion-rotation, revolution, precession, nutation, barycenter, Kepler's Laws, Gravity	1.1, 1.2
17. 12/8	Astronomy	Theories of origin for the universe, solar system, and moon (phases and eclipses); tides, space exploration, importance of solar energy to life on earth.	1.3, 1.4

18. 12/15	Review/Exam	Finals Week	