Flagler County Forensic Science 1
2023-2024 Scope and Sequence

Year at a glance: Please note that the map is based on a 180-day schedule.

Quarter 1: August 10, 2023- October 11, 2023	
Topics	Benchmark/ Standards
Introduction to Environmental Science and Earth's Systems (CH 1, 2, 3, 5.2) Community Ecology (CH 4.1, 5.1, ,5.3, 8.2)	**SC.912.L.17.10** Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle. **SC.912.L.17.20** Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability. **SC.912.E.7.7** Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change. **SC.912.E.7.8** Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively. **SC.912.P.10.2** Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity. **SC.912.L.17.6** Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism. **SC.912.L.17.5** Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.

Population Demographics and Human Population (8.1, CH 9)	**SC.912.L.17.9** Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels. **SC.912.L.17.8** Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species. **SC.912.L.17.4** Describe changes in ecosystems resulting from seasonal variations, climate change and succession. **SC.912.L.17.1** Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution. **SC.912.L.17.5** Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity. **SC.912.L.17.13** Discuss the need for adequate monitoring of environmental parameters when making policy decisions. **SC.912.L.16.10** Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues. **SC.912.L.17.20** Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability. **SC.912.L.17.15** Discuss the effects of technology on environmental quality. **SC.912.L.17.18** Describe how human population size and resource use relate to environmental quality.
Quarter 2: October 12, 2023- December 22, 2023	
Topics	Benchmark/ Standards
Biodiversity (4.3,10.1,10.2,10.3) Biomes and Aquatic Ecosystems	**SC.912.L.15.3** Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction. **SC.912.L.17.13** Discuss the need for adequate monitoring of environmental parameters when making policy decisions. **SC.912.L.17.8**

(CH 6, 7) The Atmosphere and Climate Change (CH 13)	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species. **SC.912.L.17.7** Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems. ***SC.912.L.17.4*** Describe changes in ecosystems resulting from seasonal variations, climate change and succession. **SC.912. E.7.9** Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water. ***SC.912.L.17.16*** Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution. **SC.912.L.17.13** Discuss the need for adequate monitoring of environmental parameters when making policy decisions. **SC.912.E.7.7** Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change. **SC.912.E.7.9** Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water. **SC.912.L.17.4** Describe changes in ecosystems resulting from seasonal variations, climate change and succession. **SC.912.L.17.8** Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
Quarter 3: January 6, 2024- March 14, 2024	
Topics	Benchmark/ Standards
Water Resources (CH 11) Air (CH 12) Toxicology (CH 20)	**SC.912.L.17.19** Describe how different natural resources are produced and how their rates of use and renewal limit availability. **SC.912.E.7.8** Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively. **SC.912.L.17.20** Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability. **SC.912.L.17.14** Assess the need for adequate waste management strategies. **SC.912.L.17.16**

Waste Management (CH 19)	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution. **HE.912.C.1.7** Analyze how heredity and family history can impact personal health. **SC.912.L.14.6** Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
Quarter 4: March 18, 2024- May 23, 2024	
Topics	Benchmark/ Standards
Land Management (CH 14) Nonrenewable and Renewable Energy (CH 17, CH 18)	**SC.912.L.17.4** Describe changes in ecosystems resulting from seasonal variations, climate change and succession. **SC.912.L.17.10** Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle. **SC.912.L.17.11** Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests. **SC.912.L.17.12** Discuss the political, social, and environmental consequences of sustainable use of land. **SC.912.L.17.13** Discuss the need for adequate monitoring of environmental parameters when making policy decisions. **SC.912.L.17.15** Discuss the effects of technology on environmental quality. **SC.912.L.17.19** Describe how different natural resources are produced and how their rates of use and renewal limit availability. **SC.912.L.17.20** Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability. **SC.912.E.6.6** Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.

	SC.912.L.14.6 Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.