

Unit	Week	Assessments	GSE	Topics Covered
1- Intro to Environmental Science (Test 1)	1.5	Summative test	5c 5d	Evidence based argument regarding human innovations (agricultural, medical, technological, industrial); Design and defend a plan to reduce ecological footprint Environmental Science as an interdisciplinary science; Tragedy of the Commons; Intro terms; Environmental ethics; Resources; Environmental law; Ecological footprint; Environmental world views (See http://www.aurumscience.com/environmental/1_introduction/lecture.html for PowerPoint)
2 – Ecology (Test 2)	2		1a	Levels of organization in ecosystems – organism, population, community, biosphere <u>Ch4 Lesson 1</u>
			1b	Food webs/chains, trophic levels. Use laws of thermodynamics to predict energy transfers in the ecosystem (10% rules). <u>Ch 5 Lesson 3</u>
	3	Summative test - Ecology	1c	Construct an argument for the necessity of biogeochemical cycles (water, nitrogen, phosphorus, oxygen/carbon) for sustainable ecosystems <u>Ch 3 Lesson 3 (water) and 4 (biogeochemical cycles)</u>
3 - Biomes (Project 1)	4	Summative project/presentation	1d	Biomes – relationships between physical factors and organismal adaptations (insolation, proximity to coastline, topography, etc...) Impact of physical and chemical factors on aquatic ecosystems in GA (streams, ponds, coastlines, estuaries, lakes) <u>Ecosystem/Biome Project * include Aquatic Ecosystems</u>
4 – Biodiversity and Succession (Test 3)	5		2c	Succession – Construct an argument to predict changes in biomass, biodiversity, and complexity Explore outside: observe, create timeline, make predictions <u>Ch 5 Lesson 4</u>
	6		2d	Biodiversity – ecosystem resilience (keystone, invasive, endemic, native, indicator, and endangered) Endangered Species and Invasive Species Project <u>Ch 7 All</u>
	7	Summative test – Succession and Biodiversity	1e	

5 – Energy Consumption (Test 4)	8		3a	Origin and consumption of renewable (wind, solar, geothermal, biofuel, tidal) and nonrenewable energy (fossil fuels and nuclear) <u>Ch 17 and 18 All</u>
		Summative Test	3b	Economic, social, environmental risks and benefits of renewable and nonrenewable energy sources Introduce 3c and 3d before fall break. <u>Ch 17 and 18 All</u>
6 – Climate Change (Test 5)	9		2a	Climate change – long (Milankovitch cycles) and short term (El Niño, volcanism) fluctuations <u>Ch 16 All</u>
	10	Summative test – Greenhouse Effect and Global Warming	2b	Greenhouse effect – effect of CO ₂ and methane on atmospheric chemistry <u>Ch 16 All</u>
7- Moving toward sustainability (Project 2)	11		3c	Sustainability potential of renewable and nonrenewable energy sources
	12	Summative Project	3d	Design and defend a sustainable energy plan for your area <u>Sustainability Project</u>

Environmental Science Pacing Guide – Block Schedule (2019-2020). Also read, “Environmental_Science_GSE_Learning_Targets-2017-18”.

8- Human Population Growth (Test 6)	13		4c	Human population growth affecting food demand and supply (GMOs, monocultures, desertification, Green Revolution) <u>Ch 12 Lessons 2-4</u>
	14		5a	Relationship between quality of life and human impact on environment (pop. growth, education, and gross national product) <u>Ch 12 Lessons 2-4</u>
	15	Summative Test – Human Population	5b	Analyze the demographic transition model. Compare birth and death rates in developing vs. developed nations. <u>Ch 8 All</u>
9- Human Impact (Project 3)	16		4a	Construct and revise an evidence-based claim about the effects of human activity on natural resources (ex: wastewater treatment, mining, agriculture, etc... on land, water, air, organisms)
	17	Summative Group Project – Assign problem, students create solutions	4b	Design, evaluate, and refine solutions to reduce human impact (smog, ozone depletion, urbanization, ocean acidification, global warming) <u>Human Impact Project</u>
Review	18		ALL	Review
NA (Exams)	19		ALL	Final Exams