Grade 12 Environmental Science B
Marking Period 2

STANDARDS (Key Ideas, Major Understandings, Performance Indicators, Competencies)	PACING DAYS	RESOURCES (Print, Visual, Technology, Manipulatives)	ASSESSMENT (Evidence & Scoring Guides)
Unit 5: Natural Resources			
• Water is the basis of life. The water cycle moves water around and removes impurities. • Humans can adversely impact water purity by changing the surface of the Earth, introducing pollutants, and removing water from natural sources. • Humans should try to increase the availability of water and decrease water pollution by acting as stewards for all water resources. Humans need to find a sustainable and equitable way to be stewards for our water resources. • Water, nutrients, aeration, salinity, and pH are soil characteristics. • Soil characteristics determine which plants will grow and which will not. • The soil is an ecosystem unto itself. Every terrestrial ecosystem is dependent on soil. • Over-cultivation, overgrazing, and deforestation lead to the death of plants and erosion of soil. With the erosion, desertification can occur.	25	o Project Wet: - Color Me a Watershed o Issues and Decisions #6, #18 o Activity 22 o Groundwater o Depletion o ESA21 Water Module Activities o Home Water Use o NYS DOH Chemicals in Sportfish and Game o Health Advisories o Drinking Water o Treatment Lab o ESA21 Atmosphere Labs - Ozone - Air Pollution and Asthma - Acid Rain	o Issues and Decisions #6, #18 o Activity Responses o Issues and Decisions #14, #19, #3 o Lab Responses

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• The atmosphere is composed of several gases in various layers.		o Global Dimming Lab	
• There are several natural processes that cleanse the air. Our current activities overwhelm the natural processes for cleansing.			
• Air pollution adversely affects all living things.			
• Most air pollutants are produced from the combustion of fossil fuels and the evaporation of chemical substances.			
• As with water, we need a sustainable and equitable way to steward our atmosphere.			
• Modern agriculture has increased the amount of food grown per acre, but our ability to maintain or increase this rate of food production is uncertain. The increase in productivity is often done through the use of herbicides, pesticides, and irrigation which adversely affect the environment.			
• Most developing countries are dependent on other countries for their food resources.			
• The main cause of hunger is poverty.			
• The biodiversity of all living things needs to be protected.			

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• Concern for biodiversity led to the first international environmental agreements. • The loss of biodiversity is impacted the most by the loss of habitat and the introduction of alien species. • The loss of biodiversity may lead to the collapse of an ecosystem.			
Unit 6: Environmental Legislation			
• Clean Water Act • Clean Air Act • Kyoto Protocol • Montreal Protocol • Endangered Species Act • Convention of Biological Diversity • National Park Service • Resource Conservation and Recovery Act • OSHA	8	o Food Calories and Land Lab o Sustainable Dining Lab o Planet Earth: Saving Species o www.epa.gove o www.osha.gov o www.unep.org/ozone/pdfs/montreal-protocol2000.pdf o www.kyotoprotocol.com o www.fws.gov/endangered/ o www.epa.gov/lawsregs/laws/rcra.html	o Humans and the Biosphere Packet o Video Sheet
Unit 7: Sustainable Future			

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• Natural ecosystems provide goods and services that cannot be replaced. • Conservation is the management and use of goods and resources so as to sustain the ecosystem. Reduce, Reuse, and Recycle are the key terms to any conservation program. • In order to have a sustainable future, every human must change his/her lifestyle. • A sustainable system is a process that can continue indefinitely without depleting the resources needed to continue its life. The goal of all environmentalists is for the Earth to become a sustainable system. • All of human society should be stewards of the Earth. • An ecological footprint is an analysis that measures an individual's demand on natural resources. It compares the individual's consumption of resources to the Earth's capacity to regenerate energy. • Many communities are trying to develop a plan to have a sustainable future for our world. Two such plans are the UN's Sustainable Cities Program and The President's Council on Sustainable Development.	7	o Planet Earth: The Future, Environment and Conservation o www.myfootprint.org o Walmart Movie: The High Cost of Low Prices	o Video Sheet o Footprint Quiz o Quarterly Assessment