

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 1 - Introduction</p> <p>Week 1 - Introduction to Environmental Science</p> <p><i>*short week opening week*</i></p>	<p>HS-ENV1-1. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-ENV1-3. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>	<p><u>Phenomenon</u> Fixing a Hole in the Sky The Lesson of Easter Island</p> <p><u>Activities</u> Classroom Expectations Overview Chapter 1 Vocabulary & WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.C: Ecosystem Dynamics, Functioning, and Resilience ESS2.D: Weather and Climate ESS3.D: Global Climate Change</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.7: Engaging in Argument from Evidence SEP.5: Using Mathematics and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Environment ● Environmental Science ● Environmentalism ● Natural Resource ● Renewable Natural Resource ● Nonrenewable Natural Resource ● Sustainable ● Fossil Fuel ● Ecological Footprint ● Hypothesis ● Prediction ● Independent Variable ● Dependent Variable ● Controlled Study ● Data ● Peer Review ● Theory ● Ethics ● Environmental Ethics 	<p>Classroom Policies Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 1 - Introduction</p> <p>Week 2 - Introduction to Environmental Science</p>	<p>HS-ENV1-1. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-ENV1-3. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>	<p><u>Phenomenon</u> Fixing a Hole in the Sky The Lesson of Easter Island</p> <p><u>Activities</u> Ch. 1, Sec. 1-3 Notes Chapter 1 Guided Reading WS Chapter 1 Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.C: Ecosystem Dynamics, Functioning, and Resilience ESS2.D: Weather and Climate ESS3.D: Global Climate Change</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.7: Engaging in Argument from Evidence SEP.5: Using Mathematics and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Environment ● Environmental Science ● Environmentalism ● Natural Resource ● Renewable Natural Resource ● Nonrenewable Natural Resource ● Sustainable ● Fossil Fuel ● Ecological Footprint ● Hypothesis ● Prediction ● Independent Variable ● Dependent Variable ● Controlled Study ● Data ● Peer Review ● Theory ● Ethics ● Environmental Ethics 	<p>Chapter 1 Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 1 - Introduction</p> <p>Week 3 - Economics & Environmental Policy</p>	<p>HS-ENV2-6. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</p> <p>HS-ENV6-2. Construct an argument to explain that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.</p>	<p><u>Phenomenon</u> Cleaning the Tides of San Diego and Tijuana Fighting for Clean Water</p> <p><u>Activities</u> Chapter 2 Vocabulary & WS Ch. 2, Sect. 1-3 Notes Start Chapter Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.A: Natural Resources ETS1.B: Developing Possible Solutions ESS3.C: Human Impacts on Earth Systems</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Economics ● Supply ● Demand ● Cost-Benefit Analysis ● Ecological Economics ● Environmental Economics ● Non-Market Value ● Market Failure ● Ecolabeling ● Policy ● Environmental Policy ● Environmental Impact Statement (EIS) ● Command-and-Control Approach ● Subsidy ● Green Tax ● Cap-and-Trade ● Lobbying 	<p>Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 1 - Introduction</p> <p>Week 4 - Economics and Environmental Policy</p>	<p>HS-ENV2-6. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</p> <p>HS-ENV6-2. Construct an argument to explain that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.</p>	<p><u>Phenomenon</u> Cleaning the Tides of San Diego and Tijuana Fighting for Clean Water</p> <p><u>Activities</u> Finish Chapter 2 Guided Reading WS Chapter 2 Blooket Review Chapter 3 Vocabulary & WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.A: Natural Resources ETS1.B: Developing Possible Solutions ESS3.C: Human Impacts on Earth Systems</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Economics ● Supply ● Demand ● Cost-Benefit Analysis ● Ecological Economics ● Environmental Economics ● Non-Market Value ● Market Failure ● Ecolabeling ● Policy ● Environmental Policy ● Environmental Impact Statement (EIS) ● Command-and-Control Approach ● Subsidy ● Green Tax ● Cap-and-Trade ● Lobbying 	<p>Chapter 2 Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 1 - Introduction</p> <p>Week 5 - Earth's Environmental Systems</p>	<p>HS-ENV1-4. Analyze data regarding differences between systems in equilibrium and systems in disequilibrium. Use corresponding data to support how steady state is achieved through negative and positive feedback loops.</p> <p>HS-ENV2-1. Construct and revise an explanation based on evidence for the cycling of matter through sources and sinks and how energy is transferred.</p> <p>HS-ENV5-4. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>	<p><u>Phenomenon</u> The Gulf of Mexico's Dead Zone</p> <p><u>Activities</u> Ch. 3, Sec. 1-4 Notes Chapter 3 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate LS2.B: Cycles of Matter and Energy Transfer in Ecosystems ESS2.D: Weather and Climate ESS3.D: Global Climate Change</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions SEP.5: Using Mathematics and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change CC.5: Energy and Matter CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Matter, Atom, Element ● Nucleus, Molecule ● Compound ● Hydrocarbon ● Solution, Protein ● Macromolecule ● Nucleic Acid ● Carbohydrate ● Lipid, pH ● Feedback Loop ● Erosion, Geosphere ● Lithosphere, Biosphere ● Atmosphere ● Hydrosphere ● Crust, Mantle & Core ● Tectonic Plate ● Landform, Deposition ● Evaporation ● Transpiration ● Precipitation ● Condensation ● Aquifer, Groundwater ● Law of Conservation of Matter, Nutrient ● Biogeochemical Cycle ● Primary Producer ● Photosynthesis ● Consumer ● Decomposer ● Cellular Respiration ● Eutrophication ● Nitrogen Fixation 	<p>Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 1 - Introduction</p> <p>Week 6 - Earth's Environmental Systems</p>	<p>HS-ENV1-4. Analyze data regarding differences between systems in equilibrium and systems in disequilibrium. Use corresponding data to support how steady state is achieved through negative and positive feedback loops.</p> <p>HS-ENV2-1. Construct and revise an explanation based on evidence for the cycling of matter through sources and sinks and how energy is transferred.</p> <p>HS-ENV5-4. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>	<p><u>Phenomenon</u> The Gulf of Mexico's Dead Zone</p> <p><u>Activities</u> Chapter 3 Blooket Review Chapter 4 Vocabulary & WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate LS2.B: Cycles of Matter and Energy Transfer in Ecosystems ESS2.D: Weather and Climate ESS3.D: Global Climate Change</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions SEP.5: Using Mathematics and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change CC.5: Energy and Matter CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Matter, Atom, Element ● Nucleus, Molecule ● Compound ● Hydrocarbon ● Solution, Protein ● Macromolecule ● Nucleic Acid ● Carbohydrate ● Lipid, pH ● Feedback Loop ● Erosion, Geosphere ● Lithosphere, Biosphere ● Atmosphere ● Hydrosphere ● Crust, Mantle & Core ● Tectonic Plate ● Landform, Deposition ● Evaporation ● Transpiration ● Precipitation ● Condensation ● Aquifer, Groundwater ● Law of Conservation of Matter, Nutrient ● Biogeochemical Cycle ● Primary Producer ● Photosynthesis ● Consumer ● Decomposer ● Cellular Respiration ● Eutrophication ● Nitrogen Fixation 	<p>Chapter 3 Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 2 - Ecology</p> <p>Week 7 - Population Ecology</p>	<p>HS-ENV1-5. Evaluate, measure, and communicate biological, chemical, and physical (abiotic and biotic) factors within an ecosystem.</p> <p>HS-ENV5-1. Analyze and interpret data on how the size and rate of growth of the human population in any location is affected by economic, political, religious, technological, and environmental (resource availability) factors.</p>	<p><u>Phenomenon</u> Finding Gold in a Costa Rican Cloud Forest The Cloudless Forest</p> <p><u>Activities</u> Ch. 4, Sec. 1-3 Notes Chapter 4 Guided Reading WS Chapter 4 Blookey Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.A: Earth Materials and Systems LS4.D: Biodiversity and Humans</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.8: Obtaining, Evaluating, and Communicating Information SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Ecology ● Species ● Population ● Community ● Ecosystem ● Biosphere ● Biotic Factor ● Abiotic Factor ● Habitat ● Resource ● Population Size ● Population Density ● Population Distribution ● Age Structure ● Age Structure Diagram ● Sex Ratio ● Survivorship Curve ● Immigration ● Emigration ● Migration ● Exponential Growth ● Limiting Factor ● Carrying Capacity ● Logistic Growth ● Density-Dependent Factor ● Density-Independent Factor ● Biotic Potential 	<p>Chapter 4 Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 2 - Ecology</p> <p>Week 8 - Evolution and Community Ecology</p>	<p>HS-ENV2-2. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</p>	<p><u>Phenomenon</u> Black and White, and Spread All Over A Broken Mutualism?</p> <p><u>Activities</u> Chapter 5 Vocabulary & WS Ch. 5, Sec. 1-4 Notes Start Chapter 5 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematical and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Evolution, Gene ● Mutation ● Genetic Drift ● Natural Selection ● Fitness, Adaptation ● Artificial Selection ● Speciation, Extinction ● Niche, Tolerance ● Resource Partitioning ● Predation, Coevolution ● Parasitism ● Symbiosis, Mutualism ● Herbivory ● Commensalism ● Primary Producer ● Photosynthesis ● Chemosynthesis ● Consumer ● Cellular Respiration ● Herbivore, Carnivore, Omnivore, Detritivore, Decomposer ● Trophic Level ● Biomass ● Food Chain & Web ● Keystone Species ● Succession ● Primary Succession ● Pioneer Species ● Secondary Succession ● Invasive Species 	<p>Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 2 - Ecology</p> <p>Week 9 - Evolution and Community Ecology</p>	<p>HS-ENV2-2. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</p>	<p><u>Phenomenon</u> Black and White, and Spread All Over A Broken Mutualism?</p> <p><u>Activities</u> Finish Chapter 5 Guided Reading WS Chapter 5 Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematical and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Evolution, Gene ● Mutation ● Genetic Drift ● Natural Selection ● Fitness, Adaptation ● Artificial Selection ● Speciation, Extinction ● Niche, Tolerance ● Resource Partitioning ● Predation, Coevolution ● Parasitism ● Symbiosis, Mutualism ● Herbivory ● Commensalism ● Primary Producer ● Photosynthesis ● Chemosynthesis ● Consumer ● Cellular Respiration ● Herbivore, Carnivore, Omnivore, Detritivore, Decomposer ● Trophic Level ● Biomass ● Food Chain & Web ● Keystone Species ● Succession ● Primary Succession ● Pioneer Species ● Secondary Succession ● Invasive Species 	<p>Chapter 5 Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 2 - Ecology</p> <p>Week 1 (10) - Biomes & Aquatic Ecosystems</p> <p><i>*Shortened week with P/T Conferences*</i></p>	<p>HS-ENV1-6. Use a model to locate and describe the major Earth biomes. Analyze data to assess how biomes are determined by climate (temperature and precipitation patterns) that support specific kinds of plants.</p>	<p><u>Phenomenon</u> Too Much of a Good Thing? Should Elephant Culling Be Allowed?</p> <p><u>Activities</u> Chapter 6 Vocabulary & WS Ch. 6, Sec. 1-2 Notes Biomes Canva Project</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.D: Weather and Climate</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Biome ● Climate ● Weather ● Climatograph ● Net Primary Production ● Canopy ● Emergent Layer ● Understory ● Epiphyte ● Deciduous ● Estivation ● Coniferous ● Hibernation ● Permafrost ● Salinity ● Photic Zone ● Aphotic Zone ● Benthic Zone ● Littoral Zone ● Limnetic Zone ● Wetland ● Flood Plain ● Estuary ● Upwelling 	<p>Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 2 - Ecology Week 2 (11) - Biomes & Aquatic Ecosystems <i>*After Fall Break*</i>	<p>HS-ENV1-6. Use a model to locate and describe the major Earth biomes. Analyze data to assess how biomes are determined by climate (temperature and precipitation patterns) that support specific kinds of plants.</p>	<p><u>Phenomenon</u> Too Much of a Good Thing? Should Elephant Culling Be Allowed?</p> <p><u>Activities</u> Ch. 6, Sec. 3 Notes Chapter 6 Guided Reading WS Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.D: Weather and Climate</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Biome ● Climate ● Weather ● Climatograph ● Net Primary Production ● Canopy ● Emergent Layer ● Understory ● Epiphyte ● Deciduous ● Estivation ● Coniferous ● Hibernation ● Permafrost ● Salinity ● Photic Zone ● Aphotic Zone ● Benthic Zone ● Littoral Zone ● Limnetic Zone ● Wetland ● Flood Plain ● Estuary ● Upwelling 	Bell Ringers Chapter 6 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 3 (12) - Biodiversity & Conservation	<p>HS-ENV2-7. Analyze computational tools and other technologies that allow for the management of natural resources. Evaluate the trade-offs of these tools regarding human physical and cultural needs versus sustainability and biodiversity.</p> <p>HS-ENV4-1. Use a model or simulation to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</p> <p>HS-ENV4-2. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> Saving the Siberian Tiger A Couple of Birds Make Big Comebacks</p> <p><u>Activities</u> Chapter 7 Vocabulary & WS Ch. 7, Sec. 1-3 Notes Chapter 7 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.2: Developing and Using Models SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change CC.3: Scale, Proportion, and Quantity CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Biodiversity ● Species Diversity ● Genetic Diversity ● Ecosystem Diversity ● Extirpation ● Endangered Species ● Threatened Species ● Habitat Fragmentation ● Poaching ● Endangered Species Act (ESA) ● Captive Breeding ● Species Survival Plan (SSP) ● Biodiversity Hotspot ● Endemic 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 4 (13) - Biodiversity & Conservation	<p>HS-ENV2-7. Analyze computational tools and other technologies that allow for the management of natural resources. Evaluate the trade-offs of these tools regarding human physical and cultural needs versus sustainability and biodiversity.</p> <p>HS-ENV4-1. Use a model or simulation to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</p> <p>HS-ENV4-2. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> Saving the Siberian Tiger A Couple of Birds Make Big Comebacks</p> <p><u>Activities</u> BlooKet Review Biodiversity Class Project/Activity Start Chapter 8 Vocabulary</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.2: Developing and Using Models SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change CC.3: Scale, Proportion, and Quantity CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Biodiversity ● Species Diversity ● Genetic Diversity ● Ecosystem Diversity ● Extirpation ● Endangered Species ● Threatened Species ● Habitat Fragmentation ● Poaching ● Endangered Species Act (ESA) ● Captive Breeding ● Species Survival Plan (SSP) ● Biodiversity Hotspot ● Endemic 	Bell Ringers Chapter 7 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 5 (14) - Human Population	HS-ENV4-1. Use a model or simulation to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	<p><u>Phenomenon</u> China's One-Child Policy The U.S. Census</p> <p><u>Activities</u> Chapter 8 Vocabulary WS Ch. 8, Sec. 1-3 Notes Chapter 8 Guided Reading WS Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Industrial Revolution ● Infant Mortality ● Life Expectancy ● Growth Rate ● Demography ● Total Fertility Rate ● Replacement Fertility ● Demographic Transition ● Wealth Gap 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 6 (15) - Human Population <i>*Short Week for Thanksgiving*</i>	HS-ENV4-1. Use a model or simulation to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	<p><u>Phenomenon</u> China's One-Child Policy The U.S. Census</p> <p><u>Activities</u> Chapter 8 Review & Quiz</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Industrial Revolution ● Infant Mortality ● Life Expectancy ● Growth Rate ● Demography ● Total Fertility Rate ● Replacement Fertility ● Demographic Transition ● Wealth Gap 	Bell Ringer Chapter 8 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 7 (16) - Environmental Health	<p>HS-ENV3-1. Construct an explanation based on evidence for how natural Earth hazards, such as earthquakes, tornadoes, and hurricanes, affect the environment and human activity on both a short-term and long-term scale.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> The Rise and Fall—and Rise? – of DDT Should BPA Use Be Regulated?</p> <p><u>Activities</u> Chapter 9 Vocabulary & WS Ch. 9, Sec. 1-4 Notes Start Chapter 9 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.A: Natural Resources ESS3.B: Natural Hazards ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Environmental Health ● Hazard ● Pathogen ● Epidemiology ● Toxicology ● Toxicity ● Dose ● Response ● Dose-Response Relationship ● Risk ● Risk Assessment ● Infectious Disease ● Emerging Disease ● Pollution ● Carcinogen ● Teratogen ● Neurotoxin ● Asbestos ● Radon ● Bioaccumulation ● Biomagnification ● Earthquake ● Landslide ● Tsunami ● Volcano ● Tornado ● Hurricane ● Thunderstorm ● Avalanche 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 8 (17) - Environmental Health & Urbanization	<p>HS-ENV3-1. Construct an explanation based on evidence for how natural Earth hazards, such as earthquakes, tornadoes, and hurricanes, affect the environment and human activity on both a short-term and long-term scale.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> The Rise and Fall—and Rise? – of DDT Should BPA Use Be Regulated?</p> <p><u>Activities</u> Finish Chapter 9 Guided Reading WS Blooket Review Chapter 10 Vocabulary</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.A: Natural Resources ESS3.B: Natural Hazards ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Environmental Health ● Hazard ● Pathogen ● Epidemiology ● Toxicology ● Toxicity ● Dose ● Response ● Dose-Response Relationship ● Risk ● Risk Assessment ● Infectious Disease ● Emerging Disease ● Pollution ● Carcinogen ● Teratogen ● Neurotoxin ● Asbestos ● Radon ● Bioaccumulation ● Biomagnification ● Earthquake ● Landslide ● Tsunami ● Volcano ● Tornado ● Hurricane ● Thunderstorm ● Avalanche 	Bell Ringers Chapter 9 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3 - Humans & the Environment Week 9 (18) - Urbanization	<p>HS-ENV5-2. Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</p> <p>HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.</p>	<p><u>Phenomenon</u> Growing Pains in Portland, Oregon Geographic Information Systems</p> <p><u>Activities</u> Chapter 10 Vocabulary WS Ch. 10, Sec. 1-3 Notes Chapter 10 Guided Reading WS <i>*Week 10 - Finals Week*</i> Blooket Review for Final</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Land Cover ● Land Use ● Urban Area ● Rural Area ● Urbanization ● Infrastructure ● Heat Island ● Sprawl ● City Planning ● Geographic Information System (GIS) ● Zoning ● Urban Growth Boundary (UGB) ● Smart Growth ● Ecological Restoration ● Greenway 	Bell Ringers Chapter 10 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 4 - Earth's Resources</p> <p>Week 1 (19) - Forestry and Resource Management</p> <p><i>*Short week coming back to school*</i></p>	<p>HS-ENV1-2. Use a computational representation to illustrate that humans are part of Earth's ecosystems and how human activities can, deliberately or inadvertently, alter ecosystems.</p> <p>HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.</p>	<p><u>Phenomenon</u> Battling Over Clayoquot's Big Trees Reforesting Africa</p> <p><u>Activities</u> Classroom Expectations Overview Chapter 11 Vocabulary & WS Ch. 11, Sec. 1-2 Notes</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.D: Weather and Climate ESS3.D: Global Climate Change ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Resource Management ● Maximum Sustainable Yield (MSY) ● Ecosystem-Based Management ● Adaptive Management ● Even-Aged ● Uneven-Aged ● Clear-Cutting ● Seed-Tree Approach ● Shelterwood Approach ● Selection System ● Deforestation ● Old-Growth Forest ● Multiple Use ● Monoculture ● Prescribed Burn ● Salvage Logging ● Sustainable Forestry Certification 	<p>Classroom Policies Quiz Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 4 - Earth's Resources</p> <p>Week 2 (20) - Forestry and Resource Management</p> <p><i>*Short week for MLK Day*</i></p>	<p>HS-ENV1-2. Use a computational representation to illustrate that humans are part of Earth's ecosystems and how human activities can, deliberately or inadvertently, alter ecosystems.</p> <p>HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.</p>	<p><u>Phenomenon</u> Battling Over Clayoquot's Big Trees Reforesting Africa</p> <p><u>Activities</u> Ch. 11, Sec. 3 Notes Chapter 11 Guided Reading WS Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.D: Weather and Climate ESS3.D: Global Climate Change ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Resource Management ● Maximum Sustainable Yield (MSY) ● Ecosystem-Based Management ● Adaptive Management ● Even-Aged ● Uneven-Aged ● Clear-Cutting ● Seed-Tree Approach ● Shelterwood Approach ● Selection System ● Deforestation ● Old-Growth Forest ● Multiple Use ● Monoculture ● Prescribed Burn ● Salvage Logging ● Sustainable Forestry Certification 	<p>Bell Ringers</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 3 (21) - Forestry and Resource Management & Soil and Agriculture	<p>HS-ENV5-2. Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</p> <p>HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.</p>	<p><u>Phenomenon</u> Possible Transgenic Maize in Oaxaca, Mexico Dark Earth in the Amazon</p> <p><u>Activities</u> Blooket Review Chapter 12 Vocabulary & WS Ch. 12, Sec. 1-2 Notes</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<p><i>*Chapter 12, Sections 1-2*</i></p> <ul style="list-style-type: none"> ● Soil ● Parent Material ● Bedrock ● Weathering ● Soil Horizon ● Soil Profile ● Clay ● Silt ● Sand ● Loam ● Soil Degradation ● Intercropping ● Crop Rotation ● Cover Crop ● Shelterbelt ● Tilling ● Terracing ● Contour Farming ● Overgrazing ● Desertification ● Irrigation ● Salinization ● Pesticide 	Chapter 11 Quiz Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 4 (22) - Soil & Agriculture	<p>HS-ENV5-2. Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</p> <p>HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.</p>	<p><u>Phenomenon</u> Possible Transgenic Maize in Oaxaca, Mexico Dark Earth in the Amazon</p> <p><u>Activities</u> Ch. 12, Sec. 3-4 Notes Chapter 12 Guided Reading WS Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<p><i>*Chapter 12, Sections 3-4*</i></p> <ul style="list-style-type: none"> ● Traditional Agriculture ● Yield ● Industrial Agriculture ● Green Revolution ● Biological Pest Control ● Integrated Pest Management (IPM) ● Pollinator ● Arable Land ● Food Security ● Malnutrition ● Genetic Engineering ● Genetically Modified (GM) Organism ● Biotechnology ● Feedlot ● Aquaculture ● Seed Bank ● Sustainable Agriculture ● Organic Agriculture 	Bell Ringers Chapter 12 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 5 (23) - Mineral Resources & Mining	HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.	<p><u>Phenomenon</u> Mining for... Cell Phones? Is It Safe to Mine Salt in Retsof, NY?</p> <p><u>Activities</u> Chapter 13 Vocabulary & WS Ch. 13, Sec. 1-3 Notes</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Mineral ● Precipitation ● Polymorph ● Rock ● Rock Cycle ● Ore ● Strip Mining ● Subsurface Mining ● Open Pit Mining ● Mountaintop Removal ● Placer Mining ● Tailings ● Smelting ● Acid Drainage 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 6 (24) - Mineral Resources & Mining	HS-ENV5-3. Design, evaluate and refine a technological solution that reduces impacts of human activities on natural systems.	<p><u>Phenomenon</u> Mining for... Cell Phones? Is It Safe to Mine Salt in Retsof, NY?</p> <p><u>Activities</u> Chapter 13 Guided Reading WS Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Mineral ● Precipitation ● Polymorph ● Rock ● Rock Cycle ● Ore ● Strip Mining ● Subsurface Mining ● Open Pit Mining ● Mountaintop Removal ● Placer Mining ● Tailings ● Smelting ● Acid Drainage 	Bell Ringers Chapter 13 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 7 (25) - Mineral Resources & Mining & Water Resources <i>*Short week for President's Day*</i>	<i>*Chapter 14*</i> HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).	<u>Phenomenon</u> Looking for Water...in the Desert Wastewater Treatment <u>Activities</u> Finish up Chapter 13 Mining Class Project Chapter 14 Vocabulary & WS <u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions <u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions <u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect	<i>*Chapter 14 Vocabulary*</i> <ul style="list-style-type: none"> ● Fresh Water ● Surface Water ● Runoff ● River System ● Watershed ● Groundwater ● Permeable ● Impermeable ● Aquifer ● Water Table ● Recharge Zone ● Well ● Water Diversion ● Dam ● Reservoir ● Salinization ● Desalination ● Xeriscaping ● Point-Source Pollution ● Nonpoint-Source Pollution ● Cultural Eutrophication ● Wastewater ● Algal Bloom ● Pathogen ● Red Tide ● Septic System 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 8 (26) - Water Resources	HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).	<p><u>Phenomenon</u> Looking for Water...in the Desert Wastewater Treatment</p> <p><u>Activities</u> Finish Chapter 14 Vocabulary WS Ch. 14, Sec. 1-3 Notes</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Fresh Water ● Surface Water ● Runoff ● River System ● Watershed ● Groundwater ● Permeable ● Impermeable ● Aquifer ● Water Table ● Recharge Zone ● Well ● Water Diversion ● Dam ● Reservoir ● Salinization ● Desalination ● Xeriscaping ● Point-Source Pollution ● Nonpoint-Source Pollution ● Cultural Eutrophication ● Wastewater ● Algal Bloom ● Pathogen ● Red Tide ● Septic System 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 9 (27) - Water Resources & The Atmosphere	<p>HS-ENV2-5. Use a model or simulation to analyze how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. Observe that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> Charging Toward Cleaner Air in London The Clean Air Act and Acid Rain</p> <p><u>Activities</u> Blooket Review Chapter 15 Vocabulary & WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter CC.2: Cause and Effect</p>	<p><i>*Chapter 15 Vocabulary*</i></p> <ul style="list-style-type: none"> ● Atmosphere ● Relative Humidity ● Air Pressure ● Troposphere ● Stratosphere ● Ozone Layer ● Mesosphere ● Thermosphere ● Radiation ● Conduction ● Convection ● Convection Current ● Air Mass ● Front ● Air Pollution ● Emission ● Fossil Fuel ● Primary Air Pollutant ● Secondary Air Pollutant ● Smog ● Temperature Inversion ● Acid Deposition ● Clean Air Act ● Catalytic Converter ● Scrubber ● Ozone Hole ● Chlorofluorocarbon (CFC) ● Montreal Protocol 	Bell Ringers Chapter 14 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 10 (28) - The Atmosphere <i>*End of Q3 is 3-15-23... 10 Weeks*</i> <i>*Ch. 15 Quiz on 3-19-23*</i>	<p>HS-ENV2-5. Use a model or simulation to analyze how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. Observe that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> Charging Toward Cleaner Air in London The Clean Air Act and Acid Rain</p> <p><u>Activities</u> Ch. 15, Sec. 1-3 Notes Chapter 15 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Atmosphere ● Relative Humidity ● Air Pressure ● Troposphere ● Stratosphere ● Ozone Layer ● Mesosphere ● Thermosphere ● Radiation ● Conduction ● Convection ● Convection Current ● Air Mass ● Front ● Air Pollution ● Emission ● Fossil Fuel ● Primary Air Pollutant ● Secondary Air Pollutant ● Smog ● Temperature Inversion ● Acid Deposition ● Clean Air Act ● Catalytic Converter ● Scrubber ● Ozone Hole ● Chlorofluorocarbon (CFC) ● Montreal Protocol 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 4 - Earth's Resources Week 1 (29) - The Atmosphere <i>*Week before Spring Break*</i>	<p>HS-ENV2-5. Use a model or simulation to analyze how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. Observe that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants.</p> <p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> Charging Toward Cleaner Air in London The Clean Air Act and Acid Rain</p> <p><u>Activities</u> Blooket Review</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Atmosphere ● Relative Humidity ● Air Pressure ● Troposphere ● Stratosphere ● Ozone Layer ● Mesosphere ● Thermosphere ● Radiation ● Conduction ● Convection ● Convection Current ● Air Mass ● Front ● Air Pollution ● Emission ● Fossil Fuel ● Primary Air Pollutant ● Secondary Air Pollutant ● Smog ● Temperature Inversion ● Acid Deposition ● Clean Air Act ● Catalytic Converter ● Scrubber ● Ozone Hole ● Chlorofluorocarbon (CFC) ● Montreal Protocol 	Bell Ringer Chapter 15 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 2 (30) - Global Climate Change <i>*Week after Spring Break*</i>	HS-ENV1-7. Observe the difference between weather and climate. Observe how weather can be influenced by global climatic patterns, such as El Niño and La Niña. Use a model or simulation to observe the factors that influence weather and climate, the action of gravitational forces, and the rotation of the Earth.	<p><u>Phenomenon</u> Rising Seas May Flood the Maldiv Islands Climate Clues in Ice</p> <p><u>Activities</u> Chapter 16 Vocabulary & WS Ch. 16, Sec. 1-4 Notes Start Chapter 16 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.D: Weather and Climate</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Greenhouse Effect ● Greenhouse Gas ● Thermohaline Circulation ● El Niño ● Topography ● Global Climate Change ● Global Warming ● Proxy Indicator ● Climate Model ● Fossil Fuel ● Coral Bleaching ● Carbon Footprint ● Carbon Tax ● Carbon Offset ● Carbon Sequestration ● Kyoto Protocol 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 3 (31) - Global Climate Change & Nonrenewable Energy	HS-ENV1-7. Observe the difference between weather and climate. Observe how weather can be influenced by global climatic patterns, such as El Niño and La Niña. Use a model or simulation to observe the factors that influence weather and climate, the action of gravitational forces, and the rotation of the Earth.	<p><u>Phenomenon</u> Rising Seas May Flood the Maldiv Islands Climate Clues in Ice</p> <p><u>Activities</u> Finish Chapter 16 Guided Reading WS Blooket Review Chapter 17 Vocabulary</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS2.D: Weather and Climate</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Greenhouse Effect ● Greenhouse Gas ● Thermohaline Circulation ● El Niño ● Topography ● Global Climate Change ● Global Warming ● Proxy Indicator ● Climate Model ● Fossil Fuel ● Coral Bleaching ● Carbon Footprint ● Carbon Tax ● Carbon Offset ● Carbon Sequestration ● Kyoto Protocol 	Bell Ringers Chapter 16 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 4 (32) - Nonrenewable Energy	HS-ENV2-4. Analyze and interpret the data on the benefits and disadvantages of the different sources of energy including fossil fuels, nuclear energy, hydroelectric, wind, solar, geothermal and biofuels.	<p><u>Phenomenon</u> Oil or Wilderness on Alaska’s North Slope? Using Coal to Generate Electricity</p> <p><u>Activities</u> Chapter 17 Vocabulary WS Ch. 17, Sec. 1-4 Notes Chapter 17 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Energy ● Kinetic Energy ● Potential Energy ● Combustion ● Energy Efficiency ● Renewable Energy ● Nonrenewable Energy ● Electricity ● Strip Mining ● Subsurface Mining ● Petroleum ● Petrochemical ● Oil Sands ● Oil Shale ● Methane Hydrate ● Acid Drainage ● Energy Conservation ● Nuclear Energy ● Nuclear Fission ● Nuclear Reactor ● Meltdown ● Nuclear Waste ● Nuclear Fusion 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 5 - Toward a Sustainable Future</p> <p>Week 5 (33) - Nonrenewable Energy</p>	<p>HS-ENV2-4. Analyze and interpret the data on the benefits and disadvantages of the different sources of energy including fossil fuels, nuclear energy, hydroelectric, wind, solar, geothermal and biofuels.</p>	<p><u>Phenomenon</u> Oil or Wilderness on Alaska’s North Slope? Using Coal to Generate Electricity</p> <p><u>Activities</u> Blooket Review Finish Up Chapter 17</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Energy ● Kinetic Energy ● Potential Energy ● Combustion ● Energy Efficiency ● Renewable Energy ● Nonrenewable Energy ● Electricity ● Strip Mining ● Subsurface Mining ● Petroleum ● Petrochemical ● Oil Sands ● Oil Shale ● Methane Hydrate ● Acid Drainage ● Energy Conservation ● Nuclear Energy ● Nuclear Fission ● Nuclear Reactor ● Meltdown ● Nuclear Waste ● Nuclear Fusion 	<p>Bell Ringers Chapter 17 Quiz</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 6 (34) - Renewable Energy Alternatives	HS-ENV2-4. Analyze and interpret the data on the benefits and disadvantages of the different sources of energy including fossil fuels, nuclear energy, hydroelectric, wind, solar, geothermal and biofuels.	<p><u>Phenomenon</u> Germany's Big Bet on Renewable Energy Are Biofuels Better for the Environment?</p> <p><u>Activities</u> Chapter 18 Vocabulary & WS Ch. 18, Sec. 1-4 Notes Start Chapter 18 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Biomass Energy ● Biofuel ● Biopower ● Geothermal Energy ● Ground Source Heat Pump ● Hydropower ● Tidal Energy ● Ocean Thermal Energy Conversion (OTEC) ● Passive Solar Heating ● Active Solar Heating ● Flat-Plate Solar Collector ● Photovoltaic (PV) Cell ● Concentrating Solar Power (CSP) ● Wind Turbine ● Wind Farm ● Electrolysis ● Fuel Cell 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 7 (35) - Renewable Energy Alternatives & Waste Management	HS-ENV2-4. Analyze and interpret the data on the benefits and disadvantages of the different sources of energy including fossil fuels, nuclear energy, hydroelectric, wind, solar, geothermal and biofuels.	<p><u>Phenomenon</u> Germany's Big Bet on Renewable Energy Are Biofuels Better for the Environment?</p> <p><u>Activities</u> Finish Chapter 18 Guided Reading WS Blooket Review Chapter 19 Vocabulary</p> <p><u>DCI (Disciplinary Core Ideas)</u> PS3.D: Energy in Chemical Processes ESS3.A: Natural Resources</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Biomass Energy ● Biofuel ● Biopower ● Geothermal Energy ● Ground Source Heat Pump ● Hydropower ● Tidal Energy ● Ocean Thermal Energy Conversion (OTEC) ● Passive Solar Heating ● Active Solar Heating ● Flat-Plate Solar Collector ● Photovoltaic (PV) Cell ● Concentrating Solar Power (CSP) ● Wind Turbine ● Wind Farm ● Electrolysis ● Fuel Cell 	Bell Ringers Chapter 18 Quiz

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 8 (36) - Waste Management	<p>HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).</p>	<p><u>Phenomenon</u> Transforming New York’s Fresh Kills Landfill The Recycling Process</p> <p><u>Activities</u> Chapter 19 Vocabulary WS Ch. 19, Sec. 1-3 Notes Chapter 19 Guided Reading WS</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Waste ● Municipal Solid Waste ● Industrial Waste ● Hazardous Waste ● Sanitary Landfill ● Leachate ● Incineration ● Source Reduction ● Biodegradable ● Composting ● Recycling ● Material Recovery Facility (MRF) ● E-waste ● Surface Impoundment ● Deep-Well Injection ● Radioactive Waste ● Superfund 	Bell Ringers

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5 - Toward a Sustainable Future Week 9 (37) - Waste Management	HS-ENV6-1. Conduct an investigation to evaluate the effectiveness of environmental policies and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).	<p><u>Phenomenon</u> Transforming New York’s Fresh Kills Landfill The Recycling Process</p> <p><u>Activities</u> Blooket Review for Final Finals Week</p> <p><u>DCI (Disciplinary Core Ideas)</u> ESS3.C: Human Impacts on Earth Systems ETS1.B: Developing Possible Solutions</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Waste ● Municipal Solid Waste ● Industrial Waste ● Hazardous Waste ● Sanitary Landfill ● Leachate ● Incineration ● Source Reduction ● Biodegradable ● Composting ● Recycling ● Material Recovery Facility (MRF) ● E-waste ● Surface Impoundment ● Deep-Well Injection ● Radioactive Waste ● Superfund 	Final