

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 1: Ecology					
Big Ideas	<ul style="list-style-type: none"> • Environmental Science Overview • Environmental Scientists • Ecologists • Biodiversity • Habitats • Population 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • What is the overall structure of an ecosystem? • What are the different types of interactions between organisms? • What are the different biomes? • What are the differences between abiotic and biotic? • How do matter and energy affect the ecosystem? • What are the jobs of an ecologist? • What are the jobs of an environmental scientist? • What are the effects of biodiversity? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
(5 weeks)	What do students have to do related to the content? <ul style="list-style-type: none"> • Identify three jobs of an ecologist • Identify three jobs of an environmental scientist 	Used to develop the skills and knowledge <ul style="list-style-type: none"> • Researching • Videos • Interactive Kahoot and blooket 	3.1.12.A1 3.1.12.A2 3.1.12.A7 3.1.12.A8 3.1.12.C3 3.3.12.B1	BIO.A.3.2 BIO.B.4.1 BIO.B.4.2	BIO.A.3.2.1 BIO.A.3.2.2 BIO.B.4.1.1 BIO.B.4.2.1 BIO.B.4.2.2 BIO.B.4.2.3 BIO.B.4.2.4	What is the essential vocabulary of the unit or concept? Ecology Biosphere

	<ul style="list-style-type: none"> • Describe the structure of an ecosystem • Compare and contrast abiotic and biotic • Identify interactions among an ecosystem • Compare and contrast matter and energy • Debate the effects of biodiversity • Identify the effects of matter and energy in relation to the ecosystem • Identify environmental influences • Identify relationships of abiotic and biotic factors • Observe the elements of the ecosystem • Model a food web • Identify the ecological levels of an ecosystem • Identify human impact of ecosystems 	<ul style="list-style-type: none"> • Presentation based lecture • Lab based learning • Graphic organizers • Online interactives • Reading scientific procedures • Keeping a science notebook • Constructing a concept map • Developing communication skills • Answering analysis questions based on lab activities • Debating • Hands on activities • Visual worksheets • Reports 			BIO.B.4.2.5	<ul style="list-style-type: none"> Biotic Abiotic Population Community Ecosystem Biome Habitat Organism Niche Predation Symbiosis Mutualism Parasitism Herbivore Carnivore Omnivore Trophic Food chain Food web Biomass Matter Nutrients Fixation
Resources	<p>Materials, texts, videos, internet sites, software, human to support instruction</p> <ul style="list-style-type: none"> • Textbook <ul style="list-style-type: none"> ○ Lab activities ○ Videos • Materials to model content • Online simulations • Ecosystem models • Smartboard applications 					
Formative Assessments	<p>What evidence (product and/or performance) will be collected to establish that content and skills are being learned?</p> <ul style="list-style-type: none"> • Mind maps • Graphic organizers • Exit tickets • Lab reports • Models • Quiz 					
Summative	<p>What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?</p>					

Assessments	<ul style="list-style-type: none">• Unit Test• Project
Strategies for ELL and IEP Support	What tools, strategies, and resources will be used to provide accommodations and modifications to support students? <ul style="list-style-type: none">• Productive pacing• Incorporate native languages• Use visuals• Small group teaching• Provide different levels of materials• Simplify language• Repetition• Provide content in multiple forms
Acceleration Strategies	What tools, strategies, and resources will be used to help advance students closer to grade-level expectations <ul style="list-style-type: none">• Scaffolding of material• Collaboration with others• Grouping of students• Concrete examples• Visuals• Integrate technology• Goal setting

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 2: The Biosphere					
Big Ideas	<ul style="list-style-type: none"> • Biosphere systems • Water Cycle • Ecosystems • Atmosphere • Pollution • Climate Change 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • What are the components of a biosphere? • How are ecosystems organized for energy transfer? • What components are in the water cycle? • How does the greenhouse effect maintain biosphere temperature range? • What are the human impacts on the biosphere? • What are the characteristics of major land biomes? • What interactions occur within communities? • What are the main climate zones? • What is the biosphere? • What are the causes of pollution? • What are the components of the atmosphere? • What are the modern atmospheric changes? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
(4 weeks)	What do students have to do related to the content?	Used to develop the skills and knowledge	3.1.12.A4 3.1.12.A5 3.1.12.A7	BIO.A.3.2 BIO.A.4.2 BIO.B.4.1	BIO.A.3.2.1 BIO.A.3.2.2 BIO.A.4.2.1	What is the essential vocabulary of the

	<ul style="list-style-type: none"> Identify biosphere components Debate human impact on the biosphere Debate human relationship with pollution Debate human relationship with climate change Identify the causes of climate change Identify the components of the atmosphere Identify the main climate zones Identify atmospheric changes Identify components of the water cycle Describe relationships in ecosystems Describe energy transfer within an ecosystem Describe the relationship with the atmosphere and pollution 	<ul style="list-style-type: none"> Researching Videos Interactive Kahoot and blooket Presentation based lecture Lab based learning Graphic organizers Online interactives Reading scientific procedures Keeping a science notebook Constructing a concept map Developing communication skills Answering analysis questions based on lab activities Debating Hands on activities Visual worksheets Reports 	3.1.12.C3 3.3.12.B1		BIO.B.4.1.1 BIO.B.4.1.2	unit or concept? Biosphere Photosynthesis Water cycle Ecosystems Atmosphere Pollution Greenhouse effect Nitrogen cycle Carbon cycle Evaporation Transpiration Ecological Pyramid Trophic level Denitrification Hydrosphere
Resources	Materials, texts, videos, internet sites, software, human to support instruction <ul style="list-style-type: none"> Textbook <ul style="list-style-type: none"> Lab activities Videos Materials to model content Online simulations Ecosystem models Smartboard applications 					
Formative Assessments	What evidence (product and/or performance) will be collected to establish that content and skills are being learned? <ul style="list-style-type: none"> Mind maps Graphic organizers Exit tickets Lab reports Models Quiz 					
Summative	What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?					

Assessments	<ul style="list-style-type: none"> ● Unit Test ● Project
Strategies for ELL and IEP Support	<p>What tools, strategies, and resources will be used to provide accommodations and modifications to support students?</p> <ul style="list-style-type: none"> ● Productive pacing ● Incorporate native languages ● Use visuals ● Small group teaching ● Provide different levels of materials ● Simplify language ● Repetition ● Provide content in multiple forms
Acceleration Strategies	<p>What tools, strategies, and resources will be used to help advance students closer to grade-level expectations</p> <ul style="list-style-type: none"> ● Scaffolding of material ● Collaboration with others ● Grouping of students ● Concrete examples ● Visuals ● Integrate technology ● Goal setting

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 3: The Land					
Big Ideas	<ul style="list-style-type: none"> • Earth's crust • Weathering • Erosion • Human use of land • Land management • Urban growth 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • How do we shape the land? • What is Earth's crust made up of? • What is weathering? • What are the similarities between weathering and erosion? • How has the land changed over time? • How does land affect human life? • What land masses make up Earth? • What are the impacts of urban growth? • How do humans use the land? • How can land be managed? • How has land management changed over time? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
(5 weeks)	What do students have to do related to the content? <ul style="list-style-type: none"> • Describe the components 	Used to develop the skills and knowledge <ul style="list-style-type: none"> • Researching 	3.1.12.C1 3.3.12.B1 3.3.12.B2 3.3.12.A7	BIO.B.3.1 BIO.B.3.2 BIO.B.3.3 BIO.B.4.1	BIO.B.3.1.1 BIO.B.3.1.2 BIO.B.3.1.3 BIO.B.3.2.1	What is the essential vocabulary of the unit or concept?

	<ul style="list-style-type: none"> of Earth's crust Identify materials of Earth's crust Describe human impact on the shaping of the land Identify weathering Identify erosion Compare and contrast weathering and erosion Describe changes in land over time Describe human impact on land Describe land impact on human life Describe impacts of urban growth Debate impacts of urban growth Identify how humans use the land Identify how land can be managed Describe how land management has changed 	<ul style="list-style-type: none"> Videos Interactive Kahoot and blookey Presentation based lecture Lab based learning Graphic organizers Online interactives Reading scientific procedures Keeping a science notebook Constructing a concept map Developing communication skills Answering analysis questions based on lab activities Debating Hands on activities Visual worksheets Reports 	<p>3.3.12.A6 3.3.12.A5</p>		<p>BIO.B.3.3.1 BIO.B.4.1.1 BIO.B.4.1.2</p>	<p>Erosion Geologist Plate tectonics Trench Magma Volcano Weathering Erosion Soil Glacier Sedimentary Metamorphic Igneous Abrasion Absorption Bedrock Topography Minerals Landslide Mudslide vegetation</p>
Resources	<p>Materials, texts, videos, internet sites, software, human to support instruction</p> <ul style="list-style-type: none"> Textbook <ul style="list-style-type: none"> Lab activities Videos Materials to model content Online simulations Ecosystem models Smartboard applications 					
Formative Assessments	<p>What evidence (product and/or performance) will be collected to establish that content and skills are being learned?</p> <ul style="list-style-type: none"> Mind maps Graphic organizers Exit tickets Lab reports Models Quiz 					
Summative	<p>What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?</p>					

Assessments	<ul style="list-style-type: none"> ● Unit Test ● Project
Strategies for ELL and IEP Support	<p>What tools, strategies, and resources will be used to provide accommodations and modifications to support students?</p> <ul style="list-style-type: none"> ● Productive pacing ● Incorporate native languages ● Use visuals ● Small group teaching ● Provide different levels of materials ● Simplify language ● Repetition ● Provide content in multiple forms
Acceleration Strategies	<p>What tools, strategies, and resources will be used to help advance students closer to grade-level expectations</p> <ul style="list-style-type: none"> ● Scaffolding of material ● Collaboration with others ● Grouping of students ● Concrete examples ● Visuals ● Integrate technology ● Goal setting

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 4: Forests & Soil					
Big Ideas	<ul style="list-style-type: none"> • Trees & Modern forestry • Rainforest changes • Fire and nature • Soil • Forest & soil around the world 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • Why are forests considered ecosystems? • How do forest layers influence animal communities? • Why are trees planted? • How do trees mitigate climate change? • What is deforestation? • Should forests only be used as a resource for people and civilization? • Should forests be used to conserve natural ecosystems and diversity? • How do animals impact the forest? • How do humans impact the forest? • Are all soils the same? • How is soil formed? • How do soils differ from one another around the world? • How can humans protect forests and the soils around the world? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
(4 weeks)	What do students have to do related to the content?	Used to develop the skills and knowledge	3.1.12.C1 3.3.12.B1 3.3.12.B2	BIO.B.3.1 BIO.B.3.2 BIO.B.3.3	BIO.B.3.1.1 BIO.B.3.1.2 BIO.B.3.1.3	What is the essential vocabulary of the

	<ul style="list-style-type: none"> Identify the relationship of forests and ecosystems Identify deforestation Describe causes of deforestation Describe human impact on forests Identify changes humans can make to conserve forests and soil Identify forest layers Identify forest components Identify types of soil Debate human impact on forests Identify uses of soil Identify resources and materials in forests Identify forest uses by humans Identify forest uses by organisms Compare soils around the world Identify how soil is formed Describe animal impact on forests Describe the relationships of trees and climate change 	<ul style="list-style-type: none"> Researching Videos Interactive Kahoot and blooKet Presentation based lecture Lab based learning Graphic organizers Online interactives Reading scientific procedures Keeping a science notebook Constructing a concept map Developing communication skills Answering analysis questions based on lab activities Debating Hands on activities Visual worksheets Reports 	<p>3.3.12.A7 3.3.12.A5</p>		<p>BIO.B.3.2.1 BIO.B.3.3.1</p>	<p>unit or concept?</p> <p>Deforestation Soil Habitat Flora Protect Conductive Encroach Forage Preservation Timber Clay Silt Sand Loam Hummus Topsoil Subsoil Bedrock Nutrients Organic Inorganic</p>
<p>Resources</p>	<p>Materials, texts, videos, internet sites, software, human to support instruction</p> <ul style="list-style-type: none"> Textbook <ul style="list-style-type: none"> Lab activities Videos Materials to model content Online simulations Ecosystem models Smartboard applications 					
<p>Formative Assessments</p>	<p>What evidence (product and/or performance) will be collected to establish that content and skills are being learned?</p> <ul style="list-style-type: none"> Mind maps Graphic organizers Exit tickets Lab reports Models Quiz 					

Summative Assessments	<p>What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?</p> <ul style="list-style-type: none"> ● Unit Test ● Project
Strategies for ELL and IEP Support	<p>What tools, strategies, and resources will be used to provide accommodations and modifications to support students?</p> <ul style="list-style-type: none"> ● Productive pacing ● Incorporate native languages ● Use visuals ● Small group teaching ● Provide different levels of materials ● Simplify language ● Repetition ● Provide content in multiple forms
Acceleration Strategies	<p>What tools, strategies, and resources will be used to help advance students closer to grade-level expectations</p> <ul style="list-style-type: none"> ● Scaffolding of material ● Collaboration with others ● Grouping of students ● Concrete examples ● Visuals ● Integrate technology ● Goal setting

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 5: Water					
Big Ideas	<ul style="list-style-type: none"> • Oceans • Marshes • Coral reefs • Marine ecosystems • Wetlands • Waterways • Human water usage 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • How prevalent is access to drinking water? • What factors influence human availability to safe drinking water? • What are the differences between ponds, pools, and lakes? • What are the components of marine ecosystems? • What are the differences between marine and land ecosystems? • How does the ocean provide nutrients for the rest of life on earth? • What is oceanography? • What is a wetland? • Why are wetlands valuable? • How do plants and animals survive in wetlands? • How is the scientific method used in marine science problem solving? • What resources do humans use from the ocean? • How are seawater properties important in sustaining life? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
	What do students have to do related	Used to develop the skills and	3.2.12.A3	BIO.A.2.1	BIO.A.2.1.1	What is the

<p>(4 weeks)</p>	<p>to the content?</p> <ul style="list-style-type: none"> ● Describe human availability of clean drinking water ● Identify effects of unsafe drinking water ● Identify causes of unsafe drinking water ● Identify locations where drinking water is unavailable ● Debate influence of availability of safe drinking water ● Identify ways the ocean provides nutrients ● Identify oceanography ● Describe the relationship of the scientific method and marine science problem solving ● Identify resources from the ocean used by humans ● Identify resources from the ocean used by organisms ● Debate human impact on oceans ● Compare and contrast various waterways ● Identify ways seawater sustains life ● Identify marine ecosystem components ● Compare and contrast marine and land ecosystems 	<p>knowledge</p> <ul style="list-style-type: none"> ● Researching ● Videos ● Interactive Kahoot and booklet ● Presentation based lecture ● Lab based learning ● Graphic organizers ● Online interactives ● Reading scientific procedures ● Keeping a science notebook ● Constructing a concept map ● Developing communication skills ● Answering analysis questions based on lab activities ● Debating ● Hands on activities ● Visual worksheets ● Reports 	<p>3.3.12.A5 3.3.12.A3 3.2.12.B7</p>	<p>BIO.A.2.3 BIO.A.4.2</p>	<p>BIO.A.2.3.2 BIO.A.4.2.1</p>	<p>essential vocabulary of the unit or concept?</p> <p>H2O Alluvial Brine Camber Confluence Levee Groundwater Runoff Basin Seep Hydrosphere Typhoon Condensation Impermeable Mineral water</p>
<p>Resources</p>	<p>Materials, texts, videos, internet sites, software, human to support instruction</p> <ul style="list-style-type: none"> ● Textbook <ul style="list-style-type: none"> ○ Lab activities ○ Videos ● Materials to model content ● Online simulations ● Ecosystem models ● Smartboard applications 					

Formative Assessments	<p>What evidence (product and/or performance) will be collected to establish that content and skills are being learned?</p> <ul style="list-style-type: none"> ● Mind maps ● Graphic organizers ● Exit tickets ● Lab reports ● Models ● Quiz
Summative Assessments	<p>What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?</p> <ul style="list-style-type: none"> ● Unit Test ● Project
Strategies for ELL and IEP Support	<p>What tools, strategies, and resources will be used to provide accommodations and modifications to support students?</p> <ul style="list-style-type: none"> ● Productive pacing ● Incorporate native languages ● Use visuals ● Small group teaching ● Provide different levels of materials ● Simplify language ● Repetition ● Provide content in multiple forms
Acceleration Strategies	<p>What tools, strategies, and resources will be used to help advance students closer to grade-level expectations</p> <ul style="list-style-type: none"> ● Scaffolding of material ● Collaboration with others ● Grouping of students ● Concrete examples ● Visuals ● Integrate technology ● Goal setting

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 6: Energy & Resources					
Big Ideas	<ul style="list-style-type: none"> • Energy transfer • Photosynthesis • Natural resources • Nuclear power • Resource conservation 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • How does energy transfer explain change? • How can conservation of energy be used? • What are the reactants and products for photosynthesis? • What organisms are doing photosynthesis? • What kind of energy does the sun provide? • What are ways in which we use natural resources? • What are the differences between renewable and nonrenewable resources? • How can we conserve natural resources? • What are the uses of natural resources? • What are the pros and cons of using resources? • What are the pros and cons of using nuclear power? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
(5 weeks)	What do students have to do related to the content? <ul style="list-style-type: none"> • Define energy transfer • Identify the relationship of 	Used to develop the skills and knowledge <ul style="list-style-type: none"> • Researching • Videos 	3.2.12.A2 3.2.12.A3 3.2.12.B3 3.3.12.A2 3.3.12.A1	BIO.A.3.1 BIO.A.3.2 BIO.A.4.2	BIO.A.3.1.1 BIO.A.3.2.1 BIO.A.3.2.2 BIO.A.4.2.1	What is the essential vocabulary of the unit or concept?

	<ul style="list-style-type: none"> ● energy transfer and change ● Describe energy conservation ● Debate conserving energy ● Identify the reactants of photosynthesis ● Identify the products of photosynthesis ● Identify organisms using photosynthesis ● Identify sun energy ● Describe uses of natural resources ● Debate conservation of natural resources ● Debate pros and cons of resources ● Identify human impact on natural resources ● Debate usage of renewable or nonrenewable resources ● Compare and contrast types of resources ● Debate best type of resource ● Identify uses of resources by ecosystems 	<ul style="list-style-type: none"> ● Interactive Kahoot and blooket ● Presentation based lecture ● Lab based learning ● Graphic organizers ● Online interactives ● Reading scientific procedures ● Keeping a science notebook ● Constructing a concept map ● Developing communication skills ● Answering analysis questions based on lab activities ● Debating ● Hands on activities ● Visual worksheets ● Reports 				<ul style="list-style-type: none"> Active Effective Thermal energy Atmosphere Life force Vital force Strength Conservation of energy Chemical energy Food chain Producers Consumers Autotrophic Heterotrophic Food web Renewable resources Nonrenewable resources Fossil fuel Nuclear power Geothermal Runoff Conservation
Resources	<p>Materials, texts, videos, internet sites, software, human to support instruction</p> <ul style="list-style-type: none"> ● Textbook <ul style="list-style-type: none"> ○ Lab activities ○ Videos ● Materials to model content ● Online simulations ● Ecosystem models ● Smartboard applications 					
Formative Assessments	<p>What evidence (product and/or performance) will be collected to establish that content and skills are being learned?</p> <ul style="list-style-type: none"> ● Mind maps ● Graphic organizers ● Exit tickets ● Lab reports ● Models ● Quiz 					

Summative Assessments	<p>What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?</p> <ul style="list-style-type: none"> ● Unit Test ● Project
Strategies for ELL and IEP Support	<p>What tools, strategies, and resources will be used to provide accommodations and modifications to support students?</p> <ul style="list-style-type: none"> ● Productive pacing ● Incorporate native languages ● Use visuals ● Small group teaching ● Provide different levels of materials ● Simplify language ● Repetition ● Provide content in multiple forms
Acceleration Strategies	<p>What tools, strategies, and resources will be used to help advance students closer to grade-level expectations</p> <ul style="list-style-type: none"> ● Scaffolding of material ● Collaboration with others ● Grouping of students ● Concrete examples ● Visuals ● Integrate technology ● Goal setting

IAA Curriculum

Content Area	Science	Grade	12
Course Name	Environmental Science		

Concepts	Unit 7: Impacts & Policies					
Big Ideas	<ul style="list-style-type: none"> • Policies • Policy impacts • Human impact • Societal consequences • Human events & the environment • Natural events & the environment 					
Key Learning Objectives & Skills	<ul style="list-style-type: none"> • Research • Problem solving • Critical thinking • Analyze data from labs • Model systems • Analyze models • Identify functions • Identify key vocabulary • Formulate answers to analysis questions • Formulate predictions 					
Essential Questions	<ul style="list-style-type: none"> • What is change? • How do living things adapt to continue living? • What patterns exist in your community? • What ecosystem components need to be conserved? • How can we sustain life? • What policies impact conservation? • What policies need to be created to sustain life? • What impacts do policies have on ecosystems and the biosphere? • How do humans impact the creation of policies? • How do societies impact ecosystems around the world? 					
Dates (estimates only)	Smart Objectives	Instructional Strategies and Activities	PA CC Standards	Keystone Anchors	Keystone Eligible Content	Vocabulary
(4 weeks)	What do students have to do related to the content? <ul style="list-style-type: none"> • Identify policies of sustainability 	Used to develop the skills and knowledge <ul style="list-style-type: none"> • Researching • Videos 	3.2.12.B6 3.2.12.B5 3.2.12.B7 3.3.12.A1	BIO.A.3.2 BIO.B.4.1 BIO.B.4.2	BIO.A.3.2.1 BIO.A.3.2.2 BIO.B.4.1.1 BIO.B.4.2.1 BIO.B.4.2.2	What is the essential vocabulary of the unit or concept?

	<ul style="list-style-type: none"> ● Research current policies ● Debate policies of sustainability ● Identify a need for change ● Identify patterns within the community ● Identify change ● Describe conservation needs ● Identify current community policies ● Identify conservation needs ● Describe sustaining life ● Debate new creation of policies ● Identify human impact on policies ● Identify society impacts ● Compare and contrast ecosystem impacts around the world ● Compare and contrast natural and human events ● Identify natural impacts on the environment ● Identify human impacts on the environment 	<ul style="list-style-type: none"> ● Interactive Kahoot and blookey ● Presentation based lecture ● Lab based learning ● Graphic organizers ● Online interactives ● Reading scientific procedures ● Keeping a science notebook ● Constructing a concept map ● Developing communication skills ● Answering analysis questions based on lab activities ● Debating ● Hands on activities ● Visual worksheets ● Reports 			BIO.B.4.2.3 BIO.B.4.2.4 BIO.B.4.2.5	Carbon credit Carbon footprint Policy Conscious consumerism Ecological regeneration Ethical investment Greenwashing Life cycle assessment Recycle Science-based targets Waste stream Greenhouse effect
Resources	Materials, texts, videos, internet sites, software, human to support instruction <ul style="list-style-type: none"> ● Textbook <ul style="list-style-type: none"> ○ Lab activities ○ Videos ● Materials to model content ● Online simulations ● Ecosystem models ● Smartboard applications 					
Formative Assessments	What evidence (product and/or performance) will be collected to establish that content and skills are being learned? <ul style="list-style-type: none"> ● Mind maps ● Graphic organizers ● Exit tickets ● Lab reports ● Models ● Quiz 					

Summative Assessments	<p>What evidence (produce and/or performance) will be collected to determine that content and skills have been learned?</p> <ul style="list-style-type: none"> ● Unit Test ● Project
Strategies for ELL and IEP Support	<p>What tools, strategies, and resources will be used to provide accommodations and modifications to support students?</p> <ul style="list-style-type: none"> ● Productive pacing ● Incorporate native languages ● Use visuals ● Small group teaching ● Provide different levels of materials ● Simplify language ● Repetition ● Provide content in multiple forms
Acceleration Strategies	<p>What tools, strategies, and resources will be used to help advance students closer to grade-level expectations</p> <ul style="list-style-type: none"> ● Scaffolding of material ● Collaboration with others ● Grouping of students ● Concrete examples ● Visuals ● Integrate technology ● Goal setting