

<p><b>Theme/Unit:</b> What is environmental science?</p> <p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Reading Outcomes</b></p>	<p><b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b></p>	<p><b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b></p>	<p><b><u>Instructional Resources</u></b></p>	
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>		<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Writing Outcomes</b></p>	<ul style="list-style-type: none"> <li>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force, friction, reaction force, energy</i>).</li> <li>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>• Create a mind map that portrays current environmental issues in Western New York. Prioritize environmental issues based on selected criteria. <ul style="list-style-type: none"> <li>○ Create a timeline of the environmental movement.</li> <li>○ Analyze the ten steps in an environmental issue framework and apply to an issue to study.</li> <li>○ Begin collecting articles and completing reviews for each unit. Keep information in a journal.</li> </ul> </li> </ul>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Literature</b></p>
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 1 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Language/Listening and Speaking</b></p>			<p><b><u>Literature Based Writing:</u></b></p> <p><b><u>Informational Writing:</u></b></p>	
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 1 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>		<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Language/Listening and Speaking</b></p>		<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS Students will know and be able to:</p> <ol style="list-style-type: none"> <li>1. Define environmental issue and compare and contrast it to environmental problem.</li> <li>2. Conduct valuing activities to help understand diversity of values.</li> <li>3. Introduce terms: player, position, interest, belief, attitude, and value</li> <li>4. Determine environmental issues of concern to the students and your community.</li> <li>5. Gather information about environmental issues from local sources.</li> </ol>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Focus Vocabulary</b></p>

<p><b>Theme/Unit:</b> Wildlife Management</p> <p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Reading Outcomes</b></p>	<p><b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b></p>	<p><b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b></p>	<p><b>Instructional Resources</b></p>	
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>		<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Writing Outcomes</b></p>	<p>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</p> <p>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</p> <p>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force</i>, <i>friction</i>, <i>reaction force</i>, <i>energy</i>).</p> <p>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</p>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>Engage in a class debate addressing the following question: Is it safe to eat the fish out of Lake Ontario? Provide evidence to support a particular position and provide evidence for this debate by creating a Player analysis grid that includes the players involved in this debate, their positions, interests, beliefs, and values.</li> <li>Engage in a class debate addressing the following question: Should hunting be used as a management strategy in NYS Parks? Provide evidence to support a particular position and provide evidence for this debate by creating a player analysis grid that includes the players involved in this debate, their positions, interests, beliefs, and values.</li> <li>Create a visual of at least two invasive species. The visual needs to communicate how they got here and their positive and negative impact on the environment.</li> <li>Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> </ul> <p><b>Literature Based Writing:</b></p> <p><b>Informational Writing:</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Literature</b></p>
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 2 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Language/Listening and Speaking</b></p>		<p>• Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</p> <p>• Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</p>	<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS Students will know and be able to:</p> <ol style="list-style-type: none"> <li>Recognize the characteristics of the ecosystems in Western New York.</li> <li>Define bioaccumulation and understand the amount of bioaccumulation of toxins in Lake Ontario and its economic impact.</li> <li>Identify the different values, beliefs and interests associated with hunting.</li> <li>Identify wildlife management techniques.</li> <li>Define invasive species and identify examples in Western New York.</li> <li>Discuss the different values, beliefs, and interests associated with invasive species.</li> <li>Identify sources of habitat destruction and examine the players in this environmental issue.</li> <li>Explain the role of seasons in wildlife management.</li> <li>Examine the role of birds of prey and identify the birds of prey in our ecosystem.</li> </ol>	
					<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Focus Vocabulary</b></p>

<p><b>Theme/Unit:</b> Water Quality</p> <p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<u>Reading Outcomes</u>	<b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b>	<b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b>	<u>Instructional Resources</u>		
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>		<u>Writing Outcomes</u>	<ul style="list-style-type: none"> <li>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force, friction, reaction force, energy</i>).</li> <li>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>• Create a graph to illustrate the percentage of drinking water in the world in comparison to nondrinkable water.</li> <li>• Illustrate the water movement through the Great Lakes. Graph the average daily lake level over the past few years. Discuss and create a graphic display of the impact of high and low lake levels.</li> <li>• Tour, illustrate, and describe the local wastewater treatment center.</li> <li>• Color-code a map illustrating the watersheds, point, and non-point pollution sources.</li> <li>• Calculate personal water usage per day, graph the results and decide whether you should be concerned by your personal usage. Provide evidence for your decision based on your position of water resources.</li> <li>• Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>○ It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>• Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview</li> </ul>	<u>Literature</u>	<p>The Environment And You, Christensen p. 332-374</p>
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 3 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>			<u>Language/Listening and Speaking</u>			<p><b>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</b> Students will know and be able to:</p> <ol style="list-style-type: none"> <li>1. Define watershed.</li> <li>2. Create a visual of Western New York and identify the source(s) of our drinking water in Allegany County.</li> <li>3. Identify the alternatives to public water and the pros and cons of each of them.</li> <li>4. Identify and explain the processes used to protect and treat local water sources.</li> <li>5. Gain awareness of water pollution issues in Western New York.</li> <li>6. Examine the NYS laws related to water quality and identify local water issues.</li> </ol>

Theme/Unit: Waste Management	Standards-Based Essential Skills to be Targeted Throughout the Unit		Strategies or Best Practices Used to Explicitly Teach Skills and Concepts	Instructional Resources	
<p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<u>Reading Outcomes</u>	<ul style="list-style-type: none"> <li>Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force, friction, reaction force, energy</i>).</li> <li>Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>Generate a personal hazardous waste inventory of your home and identify which chemicals need to be disposed of and explain how that should take place.</li> <li>Illustrate the difference between a sanitary versus secure landfill. Determine the number of paths waste streams can take by contacting/interviewing a waste management site/business.</li> <li>Engage in a class debate addressing the following question: Should the cafeteria use real dishes and utensils instead of disposals? Provide evidence to support a particular position and provide evidence for this debate by creating a Player analysis grid that includes the players involved in this debate, their positions, interests, beliefs, and values.</li> <li>Design questions you would ask the Town Board if a landfill was going to be built near your house? What would you want to know?</li> <li>Do a case study analysis of the Love Canal issue. Complete a Player Analysis Grid. Identify other Superfund sites.</li> <li>Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: -It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> <li>Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<u>Literature</u>	The Environment And You, Christensen p. 554-578
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<u>Writing Outcomes</u>	<ul style="list-style-type: none"> <li>Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b>Literature Based Writing:</b></p> <p><b>Informational Writing:</b></p>	<u>Informational</u>	
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 4 review Embedded questions in notes Knowledge objective questions</p>	<u>Language/Listening</u>		<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</p> <p>Students will know and be able to:</p> <ol style="list-style-type: none"> <li>Identify the difference between hazardous and non-hazardous waste.</li> <li>Explain the process for disposing of hazardous waste and the impact on he surrounding community.</li> <li>Define waste stream.</li> <li>Define solid waste.</li> <li>Explain the difference between a sanitary versus secure landfill and its</li> </ol>	<u>Focus Vocabulary</u>	<p><b>Academic/Content Vocabulary:</b> primary treatment, secondary treatment, tertiary treatment, leach field, graywater, sanitary landfill, compost, closed-loop recycling, open-loop recycling, hazardous water, bioremediation, e-waste,</p>

<p><u>Websites:</u></p>		<p>impact on the environment. 6. Summarize the benefits and potential problems with recycling. Analyze alternatives for reducing waste. 7. Explain what the Superfund List is and how the list is generated.</p>		
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<p><b>Theme/Unit:</b> Energy</p> <p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<u>Reading Outcomes</u>	<b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b>	<b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b>	<u>Instructional Resources</u>
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<u>Writing Outcomes</u>	<ul style="list-style-type: none"> <li>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force, friction, reaction force, energy</i>).</li> <li>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>• Create a visual representing the types of energy used in everyday life. The data might be presented in the form of a table with a “Remarks” column-containing comments on practicality, efficiency, availability, state of the related technology, etc. The class should construct a pie chart showing the extent in percentages to which each of these sources contributes to our current energy requirements. Students should then write summary appraisals comparing this reliance on these sources with the qualifications regarding availability, limitations, and supply as reported in the first part of the procedure.</li> <li>• Construct a map of the location of natural energy resources. Identify potential problems and brainstorm how they can be addressed.</li> <li>• Using a video camera, digital photographs, drawings, etc.... Illustrate where energy usage could be made more efficient.</li> <li>• Read the home gas or electric meter everyday for a week. Calculate usage and compare with classmates. Identify the variables that impact usage.</li> <li>• Maintain a daily energy log by listing the electrical appliances and devices in use each day and the duration of use. They should do this over a period of two weeks in order to develop a credible daily average multiplying the average by 365, and comparing these figures with the annual estimates. [ A toaster is used 5 minutes daily x 365 days = 1825 minutes / 60 minutes (per hour) =30 hours annually x 1200 watts (wattage of the toaster) = 36,000 watt hours/ 1000 (watts per kw) = 36 kilowatt hours x \$.03 per kwh =\$1.08 annual cost].</li> <li>• Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>○ It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>• Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<u>Literature</u>
	<u>Informational</u>	<ul style="list-style-type: none"> <li>• Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>• Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b>Literature Based Writing:</b></p> <p><b>Informational Writing:</b></p>	

<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 5 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>	<u>Language/Listening and Speaking</u>	<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</p> <p>Students will know and be able to:</p> <ol style="list-style-type: none"> <li>1. Identify the types of energy and explain how and where each is used.</li> <li>2. List the advantages and disadvantages of conserving energy resources.</li> <li>3. Define fossil fuels and explain how they are obtained. Brainstorm alternatives to fossil fuels.</li> <li>4. Examine the local community for sources of local energy (i.e. Russell Station).</li> <li>5. Examine personal energy consumption habits.</li> <li>6. Compare and contrast energy usage and discuss the impact of energy choices on the environment.</li> <li>7. Predict future situations on the basis of present information.</li> <li>8. Propose alterations and modifications in life style which will reduce energy consumptions.</li> <li>9. Distinguish between renewable and nonrenewable resources by providing characteristics of each and giving specific examples.</li> </ol>	<u>Focus Vocabulary</u>	<p><b>Academic/Content Vocabulary:</b> electromagnetic field, kilowatt hour, transformer, peat, coal seams, lignite, bituminous coal, anthracite coal, scrubber, fly ash, hydraulic fracking, kerogen, liquefied natural gas (LNG), hydropower, hydroelectric power, photovoltaic technology, biomass energy, bioenergy, biofuels, incandescent light</p>
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<p><b>Theme/Unit:</b> Soil and Agriculture</p> <p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<u>Reading Outcomes</u>	<p><b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b></p> <ul style="list-style-type: none"> <li>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force</i>, <i>friction</i>, <i>reaction force</i>, <i>energy</i>).</li> <li>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p><b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b></p> <p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>• Create a mind map that portrays current environmental issues in Western New York with soil and agriculture. Prioritize environmental issues based on selected criteria. <ul style="list-style-type: none"> <li>○ Create a timeline of the agriculture movement.</li> <li>○ Analyze the ten steps in an environmental issue framework and apply to an issue to study in agriculture.</li> </ul> </li> <li>• Look at all aspects of agriculture including tree harvesting.</li> <li>• Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>○ It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>• Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<p style="text-align: center;"><b>Instructional Resources</b></p> <p style="text-align: center;"><u>Literature</u></p> <p>The Environment And You, Christensen p. 376-418</p>
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<u>Writing Outcomes</u>	<ul style="list-style-type: none"> <li>• Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>• Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b>Literature Based Writing:</b></p> <p><b>Informational Writing:</b></p>	<p style="text-align: center;"><u>Informational</u></p>
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 6 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>	<u>Language/Listening and Speaking</u>		<p><b>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</b></p> <p>Students will know and be able to:</p> <ol style="list-style-type: none"> <li>1. Define environmental issue and compare and contrast it to environmental problem with agriculture.</li> <li>2. Conduct valuing activities to help understand diversity of values.</li> <li>3. Introduce terms: Aquaculture, desertification, irrigation</li> <li>4. Determine environmental issues of concern to the students and your community.</li> <li>5. Gather information about environmental issues from local sources. Such as NYS DEC and Allegany County soil and water.</li> </ol>	<p style="text-align: center;"><u>Focus Vocabulary</u></p> <p><b>Academic/Content Vocabulary:</b> Aquaculture, bedrock, contour farming, crop rotation, desertification, genetic engineering, genetically modified organism (GMO), irrigation, organic agriculture, pesticide, salinization, soil, soil degradation, soil horizon, soil profile, terracing, tilling, weathering</p>



<p><b>Theme/Unit:</b> Extinction &amp; Preventing Biodiversity Loss</p>		<p><b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b></p>	<p><b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b></p>	<p><b><u>Instructional Resources</u></b></p>	
<p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<p><b><u>Reading Outcomes</u></b></p>	<ul style="list-style-type: none"> <li>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force</i>, <i>friction</i>, <i>reaction force</i>, <i>energy</i>).</li> <li>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>• Create a mind map that portrays current environmental issues in Western New York evolution of all organisms. Prioritize environmental issues based on selected criteria. <ul style="list-style-type: none"> <li>○ Create a timeline of the extinction and biodiversity loss of mammals in NYS .</li> <li>○ Analyze the ten steps in an environmental issue framework and apply to an issue to study in extinction and biodiversity</li> </ul> </li> <li>• Look at how extinctions impact the ecosystem.</li> <li>• Examine the impact of loss of biodiversity on ecosystems in Allegany County and New York State.</li> <li>• Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>○ It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>• Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<p><b><u>Literature</u></b></p>	<p>The Environment And You, Christensen p. 290-330</p>
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<p><b><u>Writing Outcomes</u></b></p>	<ul style="list-style-type: none"> <li>• Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>• Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b><u>Literature Based Writing:</u></b></p> <p><b><u>Informational Writing:</u></b></p>	<p><b><u>Informational</u></b></p>	
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 8 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>	<p><b><u>Language/Listening and Speaking</u></b></p>		<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS Students will know and be able to:</p> <ol style="list-style-type: none"> <li>1. Define environmental issue and compare and contrast it to environmental problem with both extinction and biodiversity loss.</li> <li>2. Conduct valuing activities to help understand diversity of values and biodiversity.</li> <li>3. Introduce terms: Endemic, extirpation, invasive species</li> <li>4. Determine environmental issues of concern to the students and your community.</li> <li>5. Gather information about environmental issues from local sources. Such as NYS DEC.</li> </ol>	<p><b><u>Focus Vocabulary</u></b></p>	<p><b><u>Academic/Content Vocabulary:</u></b> Endangered species, endemic, extinction, extirpation, habitat fragmentation, invasive species, mass extinction, poaching</p>

<p><b>Theme/Unit:</b> Evolution and Speciation</p> <p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Reading Outcomes</b></p>	<p><b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b></p>	<p><b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b></p>	<p><b>Instructional Resources</b></p>	
			<ul style="list-style-type: none"> <li>• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>• Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force</i>, <i>friction</i>, <i>reaction force</i>, <i>energy</i>).</li> <li>• Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>• Create a mind map that portrays current environmental issues in Western New York evolution of all organisms. Prioritize environmental issues based on selected criteria. <ul style="list-style-type: none"> <li>○ Create a timeline of the invasive species movement.</li> <li>○ Analyze the ten steps in an environmental issue framework and apply to an issue to study in Speciation</li> </ul> </li> <li>• Look at all aspects of how a new species comes into existence.</li> <li>• Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>○ It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>• Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Literature</b></p>
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Writing Outcomes</b></p>	<ul style="list-style-type: none"> <li>• Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>• Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b>Literature Based Writing:</b></p> <p><b>Informational Writing:</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Informational</b></p>	
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 7 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>		<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Language/Listening and Speaking</b></p>			<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</p> <p>Students will know and be able to:</p> <ol style="list-style-type: none"> <li>1. Define environmental issue and compare and contrast it to environmental problem with both evolution and speciation.</li> <li>2. Conduct valuing activities to help understand diversity of values and biodiversity.</li> <li>3. Introduce terms: Adaptation, variation, mutation</li> <li>4. Determine environmental issues of concern to the students and your community.</li> <li>5. Gather information about environmental issues from local sources. Such as NYS DEC.</li> </ol>

<b>Theme/Unit:</b> Population Dynamics and Species Interactions		<b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b>	<b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b>	<b><u>Instructional Resources</u></b>	
<p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<b><u>Reading Outcomes</u></b>	<ul style="list-style-type: none"> <li>Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force</i>, <i>friction</i>, <i>reaction force</i>, <i>energy</i>).</li> <li>Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>Create a mind map that portrays current environmental issues in Western New York evolution of all organisms. Prioritize environmental issues based on selected criteria. <ul style="list-style-type: none"> <li>Create a timeline of the for the coevolution of a group of animals in NYS .</li> <li>Analyze the ten steps in an environmental issue framework and apply to an issue to study an organism’s niche along with other symbiotic relationships.</li> </ul> </li> <li>Examine the different symbiotic relationships in NYS and give an example of each type.</li> <li>Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<b><u>Literature</u></b>	The Environment And You, Christensen p. 116-142
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<b><u>Writing Outcomes</u></b>	<ul style="list-style-type: none"> <li>Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b><u>Literature Based Writing:</u></b></p> <p><b><u>Informational Writing:</u></b></p>	<b><u>Informational</u></b>	
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 9 review Embedded questions in notes Knowledge objective questions</p> <p><b>Websites:</b></p>	<b><u>Language/Listening and Speaking</u></b>		<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</p> <p>Students will know and be able to:</p> <ol style="list-style-type: none"> <li>Define environmental issue and compare and contrast it to environmental problem with symbiotic relationships and an organism’s niche.</li> <li>Conduct valuing activities to help understand diversity of values. Examine symbiotic relationships</li> <li>Introduce terms: Niche, Symbiosis and parasitism</li> <li>Determine environmental issues of concern to the students and your community.</li> <li>Gather information about environmental issues from local sources. Such as NYS DEC.</li> </ol>	<b><u>Focus Vocabulary</u></b>	<p><b><u>Academic/Content Vocabulary:</u></b> Commensalism, habitat, herbivory, mutualism, niche, parasitism, predator, prey, resource partitioning, symbiosis</p>

<b>Theme/Unit:</b> Describing Populations and Population Growth	<b>Standards-Based Essential Skills to be Targeted Throughout the Unit</b>		<b>Strategies or Best Practices Used to Explicitly Teach Skills and Concepts</b>	<b>Instructional Resources</b>	
<p><b>Enduring Understandings:</b> Human decisions and activities have a profound impact on the physical and living environment. There are multiple positions, values, beliefs, and interests as they relate to environmental issues.</p>	<b>Reading Outcomes</b>	<ul style="list-style-type: none"> <li>Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</li> <li>Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</li> <li>Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force, friction, reaction force, energy</i>).</li> <li>Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</li> </ul>	<p>Demonstrable Knowledge:</p> <ul style="list-style-type: none"> <li>Create a mind map that portrays current environmental issues in Western New York relating to population dynamics/growth. Prioritize environmental issues based on selected criteria. <ul style="list-style-type: none"> <li>Create a timeline of population growth of humans and one other species in NYS.</li> <li>Analyze the ten steps in an environmental issue framework and apply to an issue to study human population growth in relation with other animal populations in NYS.</li> </ul> </li> <li>Examine the 3 types of population distributions</li> <li>Examine the 4 factors scientist use to determine population growth</li> <li>Critically analyze at least one report, editorial and/or article related to this topic in a journal notebook. The criteria include: <ul style="list-style-type: none"> <li>It must be an environmental issue or topic connected to Western New York. The weekly journal entry must be in a notebook or separate binder. The entry must include: article title, author, author credentials. Editor, date, and source of article. The article must be attached to the journal review. The review must include the topic of the article and main idea. The review must explain how the article is directly or indirectly related to Western New York. The review must explain the point of view in which the article is written. Include your position on the topic.</li> </ul> </li> <li>Create a job description for a career from this unit using the job description template. The criteria include: Title, description, qualifications, salary range, opportunities for advancement, advantages/disadvantages of the career, location in Western NY, and five specific questions you would ask of a candidate in an interview.</li> </ul>	<b>Literature</b>	The Environment And You, Christensen p. 116-142
<p><b>Assessments:</b></p> <p><b>Formative – During Unit:</b> Worksheets, Vocabulary Quiz, Unit Quiz</p> <p><b>Summative – End of Unit:</b> Unit Test and Laboratory Worksheets</p> <p><b>Presentation:</b></p>	<b>Writing Outcomes</b>	<ul style="list-style-type: none"> <li>Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</li> <li>Assess the extent to which the reasoning and evidence from their experiment, supporting their claim or a recommendation for solving a scientific or technical problem in the written discussion section of lab reports.</li> </ul>	<p><b>Literature Based Writing:</b></p> <p><b>Informational Writing:</b></p>	<b>Informational</b>	
<p><b>Notes:</b> Provided via fill in the blank</p> <p><b>Review:</b> Unit 10 review Embedded questions in notes Knowledge objective questions</p>	<b>Language/Listening and Speaking</b>		<p>ENVIRONMENTAL ISSUES CURRICULUM PERFORMANCE INDICATORS</p> <p>Students will know and be able to:</p> <ol style="list-style-type: none"> <li>Define environmental issue and compare and contrast it to environmental problem with population dynamics and growth.</li> <li>Conduct valuing activities to help understand diversity of values. Examine population dynamics and growth</li> <li>Introduce terms: emigration, migration, immigration</li> <li>Determine environmental issues of concern to the students and</li> </ol>	<b>Focus Vocabulary</b>	<p><b>Academic/Content Vocabulary:</b> Age structure, age structure diagram, population, population density, population distribution, population size, sex ratio, biotic potential, carrying capacity, density-dependent factor, density-independent factor, emigration, exponential growth, immigration, migration, survivorship curve</p>

**Websites:**

your community.

5. Gather information about environmental issues from local sources.

Such as NYS DEC and NYS DOH